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TANZANIA WATER SECTOR ASSESSMENT FOR STRATEGY DEVELOPMENT

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COR Name: Michael McBroom
Alt COR Nathan Tenny

Prepared by: James Origa, Team Lead and Regional WASH Expert
Richard Noth, Water Expert and Technical Advisor
Winfred Mbungu, Country Water Expert
Jacob Laden, Evaluation Advisor, Data for Development, NORC at the University of Chicago
USAID Data for Development Project Assessment Specialists: Nasson Konga, Bahati Tenga, Rose Aiko and Ephraim Danford

Submitted by: David Hughes, Chief of Party
ME&A (Mendez England & Associates)
4300 Montgomery Ave. Suite 103
Bethesda, MD 20814
Tel: 301-652-4334
Email: dhughes@engl.com

Cover Photo: Water point in Kidabaga, Iringa, Tanzania.

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ACRONYMS

Acronym	Definition
AFD	French Development Agency
ATAWAS	Association of Tanzanian Water Suppliers
AfDB	African Development Bank
BCC	Behavior Change Communication
BCM	Billion Cubic Meters
BOO	Build Operate Own
BORDA	Bremen Overseas Research and Development Association
BOT	Build Operate Transfer
BWB	Basin Water Board
CAG	Controller and Auditor General
CBWSO	Community-Based Water Supply Organization
CDCS	Country Development Cooperation Strategy
CDMSW	Central Data Management System for Water
CLTS	Community-Led Total Sanitation
CM	Cubic Meters
COUNCIL	District and Township
COWSO	Community-Owned Water Supply Organization
CSO	Civil Society Organization
DAWASA	Dar es Salaam Water and Sanitation Authority
DAWASCO	Dar es Salaam Water and Sewerage Corporation
DC	District Council
DED	District Executive Director
DEWATS	Decentralized Wastewater Treatment System
DFID	Department for International Development
DLI	Disbursement-Linked Indicator
DP	Development Partner
DPG	Development Partners Group
DWE	District Water Engineer
DWM	District Water Manager
EPC	Engineering Procurement and Construction
EU	European Union
EWURA	Energy and Water Utilities Regulatory Agency
FAO	Food and Agriculture Organization of the United Nations
FSM	Fecal Sludge Management
FY	Financial Year
GDP	Gross Domestic Product
GI	Group Interview
GIZ	German Development Organization
GoT	Government of Tanzania

Acronym	Definition
ha	Hectares
HBS	Household Budget Survey
IFF	Investment Financing Facility
IFMIS	Integrated Financial Management Information System
INGO	International Non-Governmental Organization
IP	Implementing Partner
IWRMDP	Integrated Water Resources Management and Development Plan
KfW	German Development Bank
KI	Key Informant
KII	Key Informant Interview
km	Kilometers
km^2	Square Kilometers
KOICA	Korea International Cooperation Agency
LGA	Local Government Authority
M&E	Monitoring & Evaluation
MCM	Million Cubic Meters
MDAs	Ministries, Departments, and Agencies
MoEST	Ministry of Education, Science, and Technology
MoHCDGEC	Ministry of Health, Community Development, Gender, Elderly, and Children
MOU	Memorandum of Understanding
MoW	Ministry of Water
MWAUWASA	Mwanza Urban Water Supply and Sanitation Authority
NBS	National Bureau of Statistics
NGO	Non-Governmental Organization
NIMR	National Institute for Medical Research
NRW	Non-Revenue Water
NSC	National Sanitation Campaign
NSIMS	National Sanitation Information Management System
NWF	National Water Fund
O&M	Operations & Management
ODF	Open Defecation Free
OPM	Oxford Policy Management
PBC	Performance-Based Contract
PbR	Payment by Results
PO-RALG	President's Office-Regional Administration and Local Governments
PPP	Public-Private Partnership
PSP	Private Sector Participation
RUWASA	Rural Water Supply and Sanitation Agency
SAGCOT	Southern Agricultural Growth Corridor of Tanzania
SBCC	Social and Behavior Change Communication

Acronym	Definition
SDG	Sustainable Development Goal
SNV	Netherlands Development Organization
SOW	Statement of Work
SWAp	Sector-Wide Approach
SWASH	Strategic Plan for School Water, Sanitation, and Hygiene
TAWASANET	Tanzania Water and Sanitation Network
TDV	Tanzania Development Vision
TGNP	Tanzania Gender Networking Programme
Tsh	Tanzanian Shilling
UMAWA	Usafi wa Mazingira na Watu
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
UWSSA	Urban Water Supply and Sanitation Authority
VC	Village Council
WARIDI	Water Resources Integration Development Initiative
WASH	Water, Sanitation, and Hygiene
WB	World Bank
WRG	Water Resources Group
WRM	Water Resources Management
WSDP	Water and Sanitation Development Program
WSSA	Water Supply and Sanitation Authority
WUA	Water Users Association

EXECUTIVE SUMMARY

ASSESSMENT PURPOSE AND QUESTIONS

The main purpose of this assessment was to collect and analyze information to identify policy issues in the water sector, as well as specific blockages that hinder the Government of Tanzania (GoT) from achieving its water, sanitation, and hygiene (WASH) targets and the 2030 Sustainable Development Goals (SDGs) targets on drinking water, sanitation, and hygiene. The assessment findings are expected to inform development of the United States Agency for International Development Tanzania's (USAID/Tanzania) water and sanitation strategy for the next five-year period. The strategy will then guide the design of new water activities and provide sector guidance and objectives for USAID implementing partners (IPs).

ASSESSMENT DESIGN, METHODS, AND LIMITATIONS

The assessment used a mixed-methods approach to answer five main assessment questions outlined in the statement of work (SOW). Qualitative methods and secondary data sources were used to provide information needed to answer the assessment questions. This called for in-depth analysis of different documents and key informant interviews (KIIs) with GoT officials, private sector, civil society organizations (CSOs) and international development partners (DPs), supplemented by site observations/field visits. The structured analysis involved a two-step approach involving: systematic desk review of documents (past assessments, evaluations, program documents, policy reviews, *etc*.) related to the water sector in Tanzania, and analysis of KIIs with 51 stakeholders across the water sector including USAID Staff, International Government Agencies, Bilateral DPs, National Level Ministries and regional and basin GoT authorities (including public utilities), non-governmental organizations (NGOs), USAID and water program staff including the Water Resources Integration Development Initiative (WARIDI), and private sector actors.

FINDINGS AND CONCLUSIONS

Tanzania's water resources are in abundance but are rapidly declining. While Tanzania currently has a much higher per capita renewable water resources endowment compared to neighboring countries, projections indicate that this position may not hold due to increasing urbanization and population growth. This decline in water resources is driven by several factors including: catchment mismanagement and unsustainable agricultural practices, pollution of water sources from the mining sector, increasing sedimentation of lakes, and climate change impacts, which present risks to the country's economic growth trajectory. The current Tanzania Development Vision (TDV) 2025[1] is intimately linked to the availability of sufficient water resources. The vision seeks to transform Tanzania's economy from a low productivity agricultural economy to a semi-industrialized one led by modernized and highly productive agricultural activities. Agriculture accounts for 89 percent of total water withdrawals; a majority of farming is by small-scale farmers in rural areas with inefficient water use practices. The assessment concludes that addressing the underlying poverty-related drivers of catchment degradation—such as insecure land tenure and lack of access to financing for more-efficient farming practices—will be critical for the country to maintain its currently stable growth trajectory towards realization of vision 2025 objectives. There is a need for partnership building between community-based Water Users Associations (WUAs) and the Basin Water Boards to contain catchment degradation. Improving the institutional capacity and operational efficiency of the Basin Water Boards requires improved capacity in hydrological data management systems and institutional restructuring to

[1] The Tanzania's Development Vision 2025(TDV2025),

make the boards more autonomous.

Access to WASH services is below government targets. Despite the GoT's commitments under the Water and Sanitation Development Program (WSDP) 2 to achieve 80 percent access to improved water sources and 75 percent access to improved toilets by the year 2019, current national access levels fall below the targets set under the WSDP as well as the Second Five Year Development Plan. On average, sixty five percent of households have access to a safely managed water source, but only 25.3 percent have access to an improved toilet facility. A number of factors contribute to low levels of access, including: Delayed disbursement of funds to implementing agencies (budget tracking shows that only 32% of approved funds are released), a disproportionate allocation of resources for new infrastructure as opposed to continuous maintenance and strengthening of the service delivery; and a high number of non-functional rural water schemes (20 percent of water points are not functional within 1 year after construction). The assessment also indicates that due to a low prioritization of sanitation and hygiene investments, only two out of 88 district headquarters and townships have a fecal sludge treatment facility. Only 11 out of 26 regional water authorities have a sewerage network. For the majority of Tanzanians, poor quality latrines are a major challenge. Many rural areas lack access to basic sanitation and fixed-point open defection is widely practiced.[2] On-site sanitation rather than sewerage is widely used in urban areas.

Poor access to improved WASH services has had particularly negative impacts on women who bear a disproportionate share of the burden related to the lack of access to safe water. There are also service gaps for schools and community health facilities in supply and sanitation which disproportionately affect women and children. The national panel survey of 2014-2015 indicated that unimproved water and sanitation are associated with higher rates of stunting among children, further reinforcing the need to integrate WASH with food security, health care support, and nutrition interventions.

Institutional restructuring offers an opportunity to address sector blockages. Tanzania has adopted a new water supply and sanitation act that has introduced significant structural reforms that present an opportunity to accelerate the realization of WASH targets. The establishment of a new rural water services regulatory agency, Rural Water Supply and Sanitation Agency (RUWASA), aims to centralize and improve accountability for rural service delivery. It also aims to build capacity and professionalism for rural water supply operations and maintenance. Institutions such as the Water Institute at Ubungo and umbrella association, the Association of Tanzanian Water Suppliers (ATAWAS), serve in capacitating Urban Water Supply and Sanitation Authorities (UWSSAs) to address pressing challenges such as high non-revenue water (NRW) and financial sustainability.

Untapped private sector participation opportunities: Despite a vibrant, independent, small-scale private sector, entrepreneurs who have emerged to fill the WASH services gap face a number of blockages that are keeping the private sector from better contributing towards realization of WASH targets. These include weak financial capacity from the private sector to implement large-scale infrastructure water public-private partnerships (PPPs), lack of experience and limited understanding of PPPs in general among GoT officials resulting in implementing agencies not satisfactorily addressing all risks, the demands of project structuring, and a cumbersome PPP legislative framework which deters private sector interest and participation. There are also regulatory barriers for independent small-scale private water suppliers and WASH providers to acquire conventional financing.

Several opportunities for the government to leverage the private sector: Local Government

[2] CLTS defines poor latrines as a form of fixed-point open defecation

Authorities (LGAs) are showing a growing interest in partnering with the private sector to extend sanitation services to off-grid areas. There is also a growing interest among domestic private sector players to venture into the water services space beyond just the traditional procurement process. The establishment of a Private Sector Participation desk at the Ministry of Water (MoW) provides a platform to increase private sector participation in WASH service delivery.

RECOMMENDATIONS

USAID and/or other DPs should work with the GoT to:

1. Play a facilitative role in supporting investments in Systemic Community-wide WASH programs that address underlying drivers of poor WASH outcomes in rural areas.
2. Support water resources management (WRM) by building the capacity of Basin Water Board (BWB) Offices and community-level WUAs and use structured performance-based partnerships with BWBs.
3. Increase access to sanitation services for off-grid populations through institutional WASH in health and school facilities and through wide-scale social and behavior change communication (SBCC) activities.
4. Build the sustainability of rural water schemes through partnership with RUWASA.
5. Support UWSSAs in addressing NRW and improve the financial viability of small township UWSSAs.
6. Invest in women and youth-focused interventions that create opportunities for women and youth to build skills and work in technical roles in the sector (water/sanitation technicians, operators, masons, *etc.*). Also support women and youth-led enterprises in providing sanitation services, waste management, treatment, and manufacturing and marketing of sanitation products.

Photo 1: Water Storage Tanks Constructed with the Support of USAID in Msowero, Morogoro

1.0 INTRODUCTION

1.1 ASSESSMENT PURPOSE AND OBJECTIVES

The United States Agency for International Development (USAID) mission in Tanzania, guided by the Tanzania Country Development Cooperation Strategy (CDCS 2014-2019), has been partnering with the Government of Tanzania (GoT) to address its socio-economic challenges and advance the envisioned socio-economic transformation toward middle income status by 2025. The current CDCS is coming to an end and the Mission is currently engaged in a process of developing a new CDCS for the period 2020 to 2025. The water development agenda is an integral part of the proposed CDCS (2020-2025) currently under development. Data for Development was commissioned by the USAID/Tanzania to do a sector-wide assessment to identify policy issues in the water sector, as well as specific blockages that hinder the GoT from achieving its water sector development targets. The insights derived from the assessment are expected to inform the development of USAID/Tanzania's water and sanitation strategy for the coming five years. The strategy will then guide the design of new water activities and provide sector guidance and objectives for USAID implementing partners (IPs).

1.2 ASSESSMENT QUESTIONS

The following questions guided the assessment design and data collection instruments:

1. What are the GoT's plans and national development priorities for inclusive and sustainable socio-economic growth and how do they interlink with and affect Tanzania's water sector development? How does this connect with urban and rural economic development? What are the implications for programming in alignment with these plans?
2. How do the GoT's national development priorities and goals in water resources management (WRM) and water, sanitation, and hygiene (WASH) and aims of the international donor community align with the Sustainable Development Goals (SDGs) and what are the design implications for USAID collaboration and coordination with others in the international donor community?
    a. What laws, policies, regulations, and strategies are in place to support meeting the SDGs for WASH and are these adequate?
    b. What are the current institutional arrangements for WRM and WASH services (covering sector coordination, service delivery, regulation, and accountability) and how are these functioning in practice?
    c. What are the GoT's WASH sector planning, monitoring, evaluation, and learning arrangements and capacities?
    d. What has been the budgeting and financing track record for WRM and the WASH sector and how does this compare with requirements to meet the SDGs?
    e. What is known of the WRM and WASH sector institutional and human capacities and competencies and of capacity development programs to fill gaps?
3. What strategies are being employed in ongoing and planned efforts in WASH and WRM by USAID, other donors, and non-governmental organizations (NGOs) and where have they taken place? How are women and youth being engaged in these interventions? What are their achievements or attributes and what are the bottlenecks/challenges and lessons learned?
4. What is the involvement of the private sector in water supply, resource management, and WASH activities in urban and rural environments? What are the opportunities and challenges for enterprise in the sector? What are the incentives for partnership with public sector supply?

What policies, regulations, and strategies are in place to support/enable or hinder the private sector from participating/working in the water sector? What are the challenges and opportunities for women and youth to access private sector and entrepreneurial activities?

5. What are the key enabling factors and risks in sustaining water supply, resource management, and WASH services? How can the GoT plan, finance, and manage water supply, resources, and WASH?

1.3 ASSESSMENT TECHNICAL APPROACH AND METHODOLOGY

The assessment team used a mixed-methods approach and a variety of data sources to triangulate findings and answer the main assessment questions (and related objectives) outlined in the statement of work (SOW) detailed in Annex 1. Qualitative methods and secondary data sources were used to provide answers and information needed to answer the above questions. This mixed-methods approach calls for in-depth analysis of different documents and key informant interviews (KIIs) with GoT officials, the private sector, civil society organizations (CSOs), and international development partners (DPs), supplemented by site observations/field visits.

The structured analysis involved a two-step approach including:

1. Systematic desk review of documents (past assessments, evaluations, policy reviews, *etc*.) related to the water sector in Tanzania.
2. KIIs with over 50 stakeholders across the water sector including USAID staff, International Government Agencies, Bilateral DPs, National Level Ministries and regional and basin GoT authorities (including public utilities), NGOs, USAID and water program staff including the Water Resources Integration Development Initiative (WARIDI), and private sector actors.

The detailed approach and methodology are illustrated in detail in Annex 2.

1.3.1 Structure of the Systematic Document Review

The document review was structured around the following format, the headers are which are shown in Table 1. With alignment to the assessment questions, the assessment team coded specific recurring references along four thematic types: 1) constraints/blockers, 2) enabling factors, 3) risks to intervention, and 4) opportunities for intervention.

Table 1: Systematic Coding for Document Review

Assessment Question	Document/ Source Type	Document/ Source Citation	Thematic Types	Sub-Themes/ Building Blocks	Analytic Findings Narrative	Key Excerpts/ Quotes With/ Page Numbers
-	-	-	-	-	-	-

1.3.2 Structure and Analytical Framework for Qualitative Interviews

KIIs and group interviews (GIs) were conducted with a wide range of relevant water sector actors to identify similar themes and sub-themes and triangulate with the information emerging from the document review. Interviews helped to explain sector trends, challenges, and opportunities for sector improvement going forward. Box 1 summarizes the approach for conducting the KIIs.

Box 1: Approach Used to Undertake the KIIs and GIs

- Each KII /GI includes a semi-structured discussion around predetermined questions (included in an interview guide) with an interviewer.
- The interviews are conducted by two team members and are recorded with informed consent obtained from the participant prior to the start of the discussion. Notes are taken for record of key information from the participant and to be used as a backup to the recording.
- The interview guides include 15-20 open-ended questions, starting with broader questions and moving into specific questions.
- Audio files are translated and transcribed into English prior to analysis.
- KIIs and GIs are coded by specific themes aligned with assessment questions.
- Reporting includes quotes from the interviewee (not associated with a person's name/personal identity).

Semi-structured interviews were conducted with stakeholders as listed in Annex 3. A first set of preliminary interviews was piloted with WARIDI, and some bilateral agencies/organizations, to test the instruments and set the stage for interviews with organizations across GoT agencies, Basin Water Boards (BWBs), multilateral and bilateral DPs including USAID, development banks, the private sector, and NGOs.

The assessment team conducted qualitative analysis of interviews, including coding and triangulation of interview data, according to themes and subthemes/building blocks using a coding matrix. Analytic narratives and/or memos per assessment question and theme were triangulated with data and information from secondary sources and used for reporting. The matrix format used the following headers shown in Table 2 below.

Table 2: Analytic Matrix Used for the KIIs and GIs

Assessment Questions	Theme Types	Sub-Themes/Building Blocks	Analysis Narrative/ Findings	Key Quotes	Group Type	Organization Name
-	-	-	-	-	-	-

1.4 ASSESSMENT LIMITATIONS

- **Data availability and data quality**: In some cases, recent country data for the sector were not available and past data had to be used for mapping and visualization in the report. Also, some data quality issues pertaining to secondary data may have an effect on the reliability of results as the assessment team had no direct control of the collection of the data.
- **Recall bias**: Since a number of questions raised during the interviews address issues that took place in the past, recall bias may affect the responses provided. Some organizational staff or GoT staff have experienced turnover resulting in a loss of institutional memory and thus declined to respond to the question(s).
- **Halo bias**: There is a known tendency among respondents to under-report socially undesirable answers and alter their responses to approximate what they perceive as the social norm, called halo bias. The extent to which respondents will be prepared to reveal their true opinions may also vary for some questions that call upon the respondents to assess the attitudes and perceptions of their colleagues or people upon whom they depend for the provision of services. To mitigate this limitation, the assessment team issued confidentiality and anonymity statements to all who participate in KIIs/GIs.

2.0 COUNTRY CONTEXT

The United Republic of Tanzania, formed as a result of the union of two sovereign states, Tanganyika and Zanzibar on April 26, 1964, is situated along the Indian Ocean and borders six other countries: Kenya and Uganda to the north; Rwanda, Burundi, and the Democratic Republic of the Congo to the west; and Zambia, Malawi, and Mozambique to the south. It is the 11th largest country in sub-Saharan Africa with an area of 947,300 square kilometers (km^2) (Mainland Tanzania, 881,289 km^2; Zanzibar, 59,050 km^2) and has the 5th highest population in sub-Saharan Africa, estimated as 54.2 million in 2018.[3] With an estimated gross domestic product (GDP) of US $56 billion in 2018,[4] it is still classified as a low-income economy but is moving towards middle-income economy level spearheaded by the Tanzania Development Vision (TDV) 2025.

Tanzania has a natural resource base dominated by wildlife, forestry, marine and inland fishery resources, vast fertile lands, and minerals such as gold and gemstones. It also has an abundance of inland water, with several lakes and rivers. A majority of the country's population traditionally relies on subsistence farming. Other than agriculture and forestry, the country's vast lands offer economic opportunities for eco-tourism. With Tanzania's economy depending heavily on natural resource-based sectors like tourism, agriculture, fisheries, and mining, the country faces significant risks with these resources coming under significant pressure as the economy and the population grow. Climate change and poor governance of natural resources are further exacerbating the depletion of non-renewable resources. The impacts of climate change differ across different regions, with unpredictable variations in when rainy seasons begin (particularly in the southern agricultural corridor) and seasonal fluctuations. Rainfall is likely to become heavier, particularly in the Lake Victoria basin, coastal areas, and the northeast highlands. Other places, particularly many arid and semiarid areas, are likely to experience less rainfall. Climatic conditions are predicted to continue worsening, with temperatures rising by 1-3°C in the next 50 years. The majority rural populations are most vulnerable to these risks since they largely rely on rainfed agriculture and are particularly susceptible to adverse climatic events.

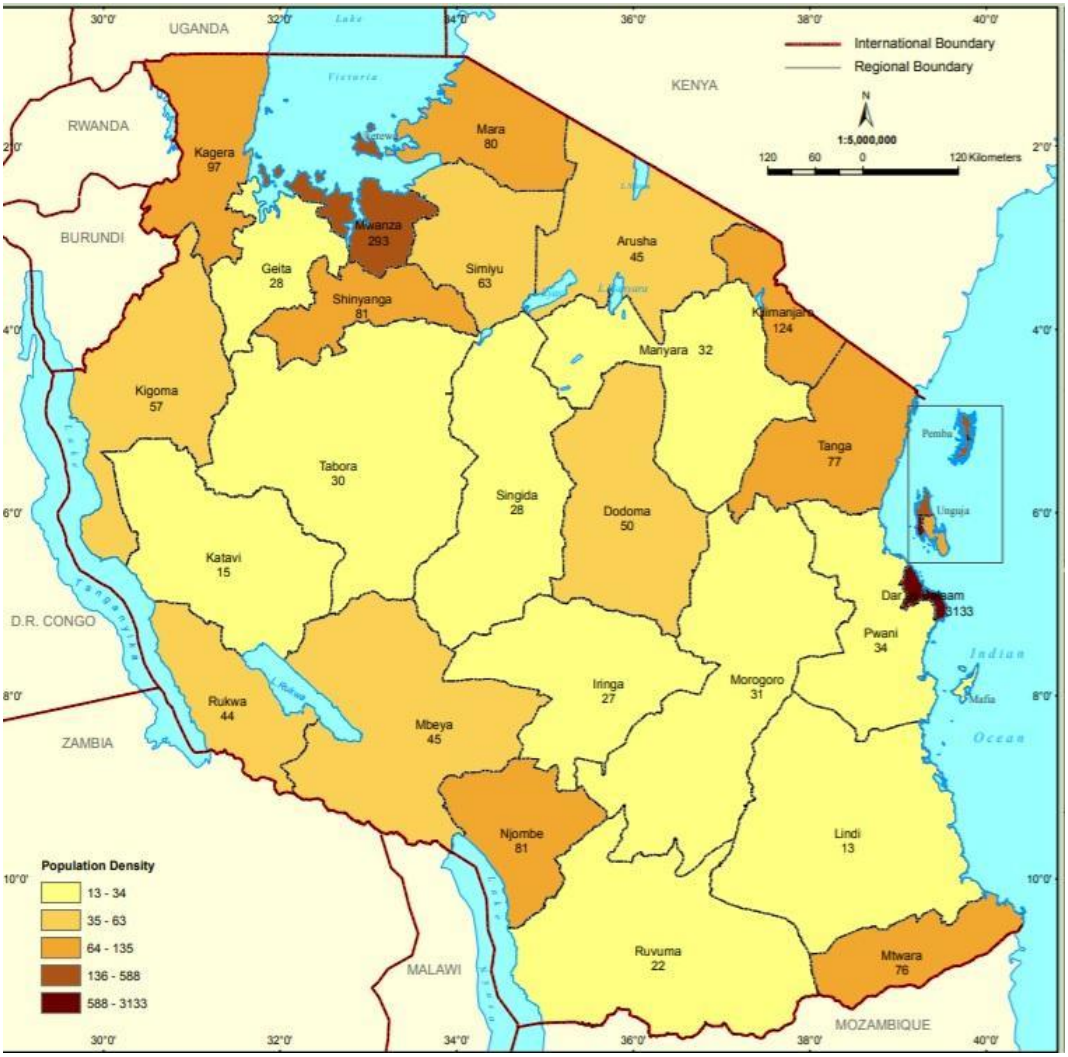
The country is administered through 31 administrative regions (*mikoa*) as shown in Figure 1. These regions are further divided into smaller administrative units known as districts, divisions, wards, and, finally, villages/streets in urban areas. The rural population makes up about 67 percent of the country's total, while Dar es Salaam City, has the largest population with roughly 6 million inhabitants.

"Imperfect" Decentralization: Tanzania's governance follows an administrative and fiscal decentralization model. Administrative decentralization is aimed at allowing Local Government Authorities (LGAs) to hire and manage local staff delinked from central ministries. However, this has not worked well with centralized agencies still recruiting and allocating human resources to the LGAs. Fiscal decentralization was intended to enable local District Councils (DCs) to have sufficient discretionary powers to collect local taxes and other sources of revenue, prepare their own budgets which reflect their priorities, and have the flexibility to expend from local earned revenues. The role of centralized line ministries should be policymaking, capacity building, monitoring, and quality assurance. However, centrally-funded mandates—such as constructing schools, health facilities, water schemes, *etc*.—still dominate local government plans and budgets making the decentralization ineffective. In particular, the water sector has undergone significant reforms in the recent past centralizing staff as well as budgets, further weakening the intended decentralization agenda.

[3] National Bureau of Statistics (NBS), June 2019. "Tanzania in Figures 2018." http://www.nbs.go.tz/.

[4] NBS, June 2019. "National Accounts Statistics." http://www.nbs.go.tz/.

Figure 1: Administrative Regions of Tanzania



Source: National Bureau of Statistics (NBS), 2018.[5]

A World Bank (WB) assessment proposes three mutually reinforcing pathways that would make it possible for the GoT to accelerate inclusive growth and ensure sustainability of growth and poverty reduction.[6] These are: 1) structural transformation – diversifying the economy into more productive sectors; 2) spatial transformation – through empowering rural areas, women, and youth as well as boosting the development of secondary cities to generate equitable growth; and 3) institutional transformation – by making its institutions more effective and efficient by building their capacity to deliver services and make effective public investments.

3.0 FINDINGS

3.1 ASSESSMENT QUESTION 1: WHAT ARE GOT'S PLANS AND NATIONAL DEVELOPMENT PRIORITIES FOR INCLUSIVE AND SUSTAINABLE SOCIO-ECONOMIC GROWTH AND HOW DO THEY

[5] NBS, February 2018, "National Population Projections." https://www.nbs.go.tz/nbs/takwimu/census2012/Projection-Report-20132035.pdf.

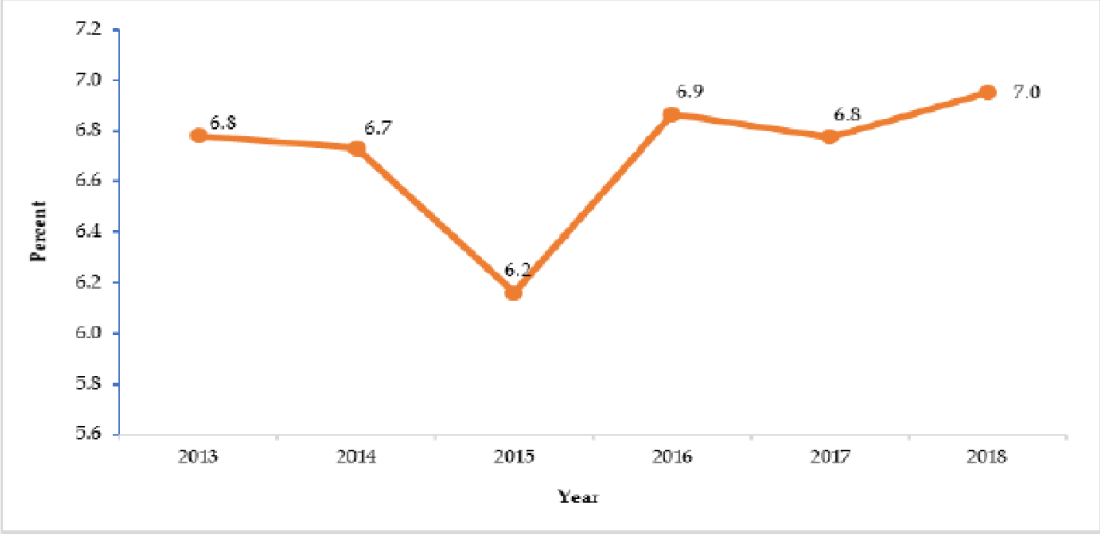
[6] WB. February 2017. United Republic of Tanzania Systematic country diagnostics.

This section presents assessment findings on constraints, risks, and enablers as well as opportunities for intervention concerning Tanzania's water resource endowment and risks as they relate to the country's future socio-economic growth and development plans.

3.1.1 Tanzania's Development Challenges and Plans For Growth

Tanzania has experienced steady economic growth since transitioning to a market-oriented economy. In the last five years, Tanzania's annual GDP has stayed consistently above the Sub-Saharan Africa average (4 percent) as shown in Figure 2. Growth is forecasted at similar performance into 2025. The result of this has been a reduction in poverty by 8 percent in 10 years, from 34.4 percent in 2007 to 26.4 percent in 2018.[7]

Figure 2: Annual GDP Changes for Tanzania Mainland



Source: NBS, 2019.[8]

The economy is largely based on natural resources—minerals and precious stones, agriculture, and tourism. Careful management of natural resources will define Tanzania's growth trajectory long term. Most employment (67 percent) comes from agriculture and 98 percent of rural women are engaged in agriculture. The GoT has adopted an ambitious industrialization vision which is dependent on water availability and sanitation services for safe management of industrial wastewater. In addition, this envisioned industrial growth requires a skilled and productive workforce in the areas of water supply and sanitation. There are significant negative effects of poor access to WASH services which adversely affect public health, particularly for children under five.

Tanzania's high rate of population growth and the increasing rural-urban migration,[9] present a significant future challenge in providing adequate access to basic services such as water supply and sanitation. This challenge will require a focus on the development of key infrastructure such as sanitation systems, among others, in secondary cities to generate equitable growth.

[7] WB, 2019, Tanzania Mainland Poverty Assessment.

[8] NBS, June 2019. Tanzania in Figures 2018.

[9] Projections indicate that about 56 percent of the total population in Tanzania will live in urban centers by the year 2050. World Urbanization Prospects: The 2018 Revision. United Nations, Department of Economic and Social Affairs, Population Division (2018).

3.1.2 Linking Water Resources Management and GoT Development Planning

The development and management of water resources is intimately linked to Tanzania's ambitions for inclusive and sustainable growth enshrined in the TDV 2025. Achieving water security to support growth and build climate resilience is key to sustain livelihoods and the achievement of the TDV 2025. Water is recognized as a cross-cutting enabler in the vision.[10] Indeed, the Water Sector Development Program (WSDP), Tanzania's overall water sector guiding strategy, is aligned with the TDV 2025. The critical linkages and contribution of the water sector to the achievement of the TDV 2025 growth objectives as detailed in the National Water Policy 2002 are summarized in Box 2.

Box 2: Enabling Role of the Water Sector in Achieving Key Tanzania Development Plan Objectives

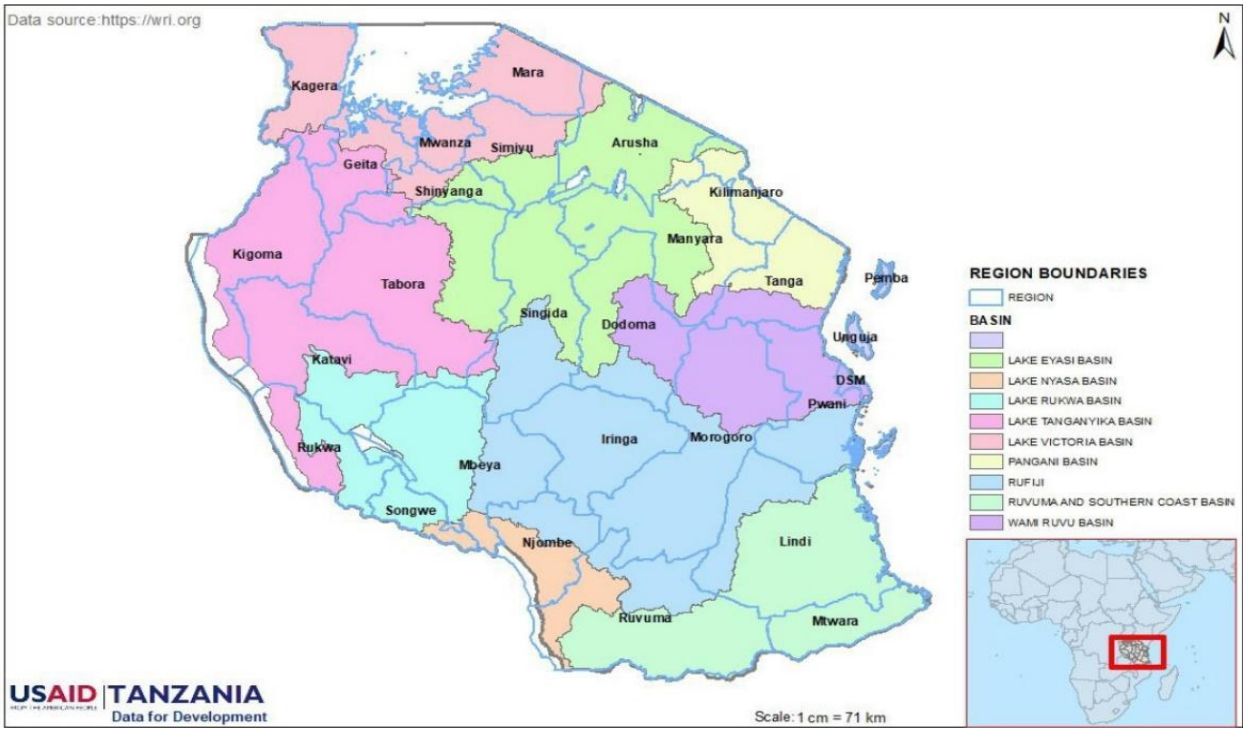
- **Improved quality of life and social well-being:** Good water management reduces exposure to waterborne diseases by increasing access to clean water and adequate sanitation.
- **Sustainable growth**: The need for the protection of existing water resources and the development of new resources are vital for the nation's productive sectors such as agriculture, industries, and tourism.
- **Equity**: Ensuring equitable and just water allocation practices and well-defined water rights that allow access to and control over water resources is critical for poverty reduction. Planning processes must involve affected communities in decision-making and from sharing benefits of water development.
- **Sustainable livelihood**: The livelihoods of poor people who depend on water resource availability will be enhanced if they secure reliable access to water resources through well-enforced water allocation.
- **Security and vulnerability**: People's vulnerability to climate variability and resource degradation leading to recurrent droughts and floods can be reduced by investing in strategies that limit and control floods and provide water storage for droughts.
- **Empowerment**: Helping people to plan and manage their own water resources by ensuring participation in decision-making, creating user organizations, and transferring operations and maintenance responsibilities to the basin level will increase empowerment and promote good governance.

Source: National Water Policy 2002

Tanzania's Water Resource endowment: Tanzania's water resources management is organized around nine basins following natural water drainage patterns and the receiving water body. Figure 3 shows the spatial distribution of the basins and major water catchment areas. Within each of these basins are also a number of smaller sub-catchments delineated along smaller rivers and streams. Five of the nine basins are transboundary in nature—Lake Victoria, Lake Tanganyika, Lake Nyasa, Ruvuma basin, and the Pangani basin—adding an additional complexity to their management. Each basin has its own governing board and basin staff who are responsible for resource management decisions and overseeing use of water resources.

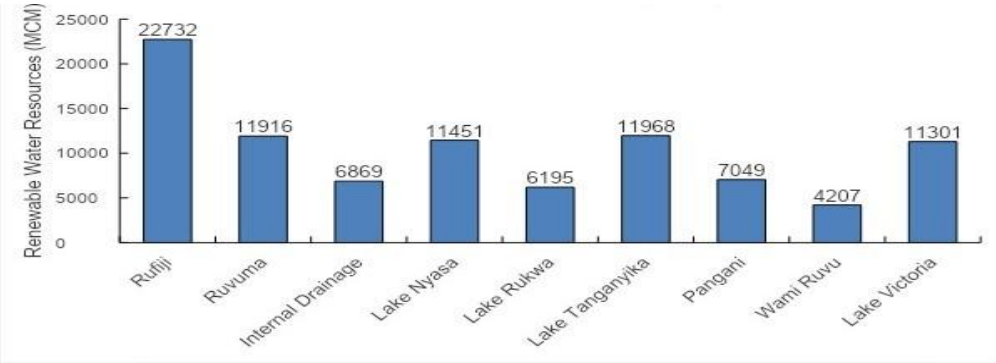
[10] Ministry of Finance (MoF), Tanzania, 1999, The Tanzania Development Vision 2025.

Figure 3: The Nine Water Basins and Catchment Areas of Tanzania



Major variations in water availability between water basins: There are considerable differences in water availability and abstraction between the nine water basins as shown in Figure 4. Rufiji basin has the highest annual renewable water resources, followed by Lake Tanganyika, Ruvuma, and Lake Nyasa. Annual rainfall is significantly higher in the basins in the southern highlands and in the southwestern part of the country in comparison with other areas in the country. The north eastern basins, Pangani and Wami/Ruvu, have the lowest annual renewable water resources. Basins with significant population growth, such as Wami/Ruvu where Dar es Salaam City is located, suffer the most shortages as the basins cannot supply the entire demand. As one of the key informants (KIs) interviewed explained: "…*Wami Ruvu for example serves a population of close to 6 million people in Dar es Salaam and also serves Morogoro and Dodoma and other small towns. The increase in population is expected to increase pressure on water resources. The Internal drainage appears to have extreme water shortage"* (KI from National Basin Board)

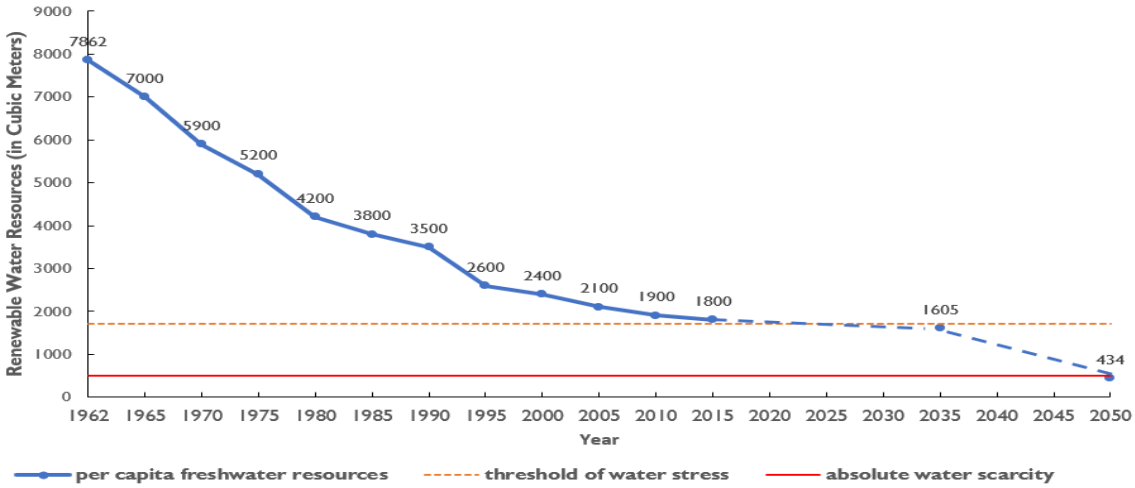
Figure 4: Renewable Water Resources Across Tanzania's Water Basins, Million Cubic Meters (MCM)



Source of Data: Ministry of Water (MoW).

Declining per capita water endowment: Tanzania is endowed with "abundant" water resources with an estimated amount of 96.27 billion cubic meters (BCM)[11] of renewable water resources per year corresponding to about 1,919 cubic meters (CM) per capita per year in 2015. While this per capita endowment is still higher than neighboring countries, Tanzania may become a water stressed country in the near future, mainly driven by its high population growth and a growing economy. Growing demands for water have depleted renewable water resources in the country from the 1960s as Figure 5 shows. Tanzania had more than 7,862 CM of per capita renewable resources per year in the 1960s, decreasing to less than 2,000 CM per capita in recent years. According to the Food and Agriculture Organization of the United Nations (FAO), per capita renewable water resources will continue to decrease to 1,605 CM per person by 2035, falling below the international threshold of water stressed countries as designated by the United Nations and may decline to absolute scarcity (434 CM) by 2050. This situation calls for a significant need to improve WRM given the trend of population growth and economic development, if the country is to avoid imminent water stress.[12]

Figure 5: Trends of the Per Capita Renewable Water Resources in Tanzania



Source: FAO Aquastat, WB Open Data and MoW.

Differing Statistics: The above data differs from those from national authorities. Interviewees at

[11] FAO Aquastat (2019).

[12] WB, Tanzania Water Security for Growth (2019).

the Ministry of Water (MoW) referencing an unpublished study for the "Participatory Planning and Management of Water Resources" indicated that the renewable water resources in the country are approximately 126 BCM. They indicated 105 BCM (83 percent) were from surface water and 21 BCM (17 percent) were from renewable groundwater resources. Per capita renewable water resources in 2019 were 2,250 CM. This differing in water statistics from different sources calls for the need to harmonize Tanzania's water resources accounting and statistics for better development planning. Despite the differences in the estimated quantity from different studies, the common feature is the declining trend of per capita renewable water resources, contributed by the increase in population.

Present and projected water use: Tanzania's policy as defined in the National Water Policy (2002)[13] and the Water Resources Management Act (2009)[14] is to prioritize water for domestic uses in rural and urban areas over other uses. The second priority is placed on the environment, in an attempt to ensure that water is protected for the sustainability of ecosystems and the environment. Other uses include agriculture, which uses water mainly for irrigation of crops and for keeping livestock, manufacturing, and mining and industry.

The TDV 2025 envisions that "*The economy will have been transformed from a low productivity agricultural economy to a semi-industrialized one led by modernized and highly productive agricultural activities.*" Agriculture is highly dependent on water and thus accounts for the highest withdrawals at 89 percent of total water withdrawal.[15] Domestic and industrial uses account for just 10 percent and 1 percent of the withdrawals respectively (see Figure 6). Environmental flow is the basic minimum flow required to be in rivers and it is enforced by the Basin Water Offices though issuance of water use permits that restrict abstraction to allowable levels. Since approximately 67 percent of the employment in Tanzania comes from the agriculture sector and 98 percent of rural women are engaged in agriculture,[16] agricultural water management will have significant impacts on the growth trajectory of Tanzania, particularly for rural women.

Over 80 percent of irrigated land in Tanzania is mainly farmed by smallholder farmers applying traditional water use practices characterized by low irrigation efficiencies, as low as 15 percent.[17] Due to lack of storage structures, irrigation in most basins is also practiced as supplemental during the rainy season and depends on direct diversion from rivers. The GoT has in the pipeline, under the TDV 2025, several large-scale irrigation projects. These include the Southern Agricultural Growth Corridor of Tanzania (SAGCOT) largely situated in the Rufiji basin which has plans to increase the area under irrigation from 110,000 hectares (ha) to 350,000 ha by the year 2025. Other projects envisioned in different basins include the Mkulazi irrigation project for sugarcane in Morogoro in the Wami Ruvu River basin.

[13] URT (2002). Tanzania National Water Policy (2002).

[14] URT(2009). Water Resources Management Act.

[15] The World Bank Group (2018). Tanzania Economic Update: Managing Water Wisely. The Urgent Need to Improve Water Resources Management in Tanzania.

[16] WB, 2019, Tanzania Water Security for Growth.

[17] 2030 WRG (World Bank). 2014. Tanzania: Hydro-Economic Overview – An Initial Analysis, Final Report.

Figure 6: Water Demand by Different Sectors in Tanzania

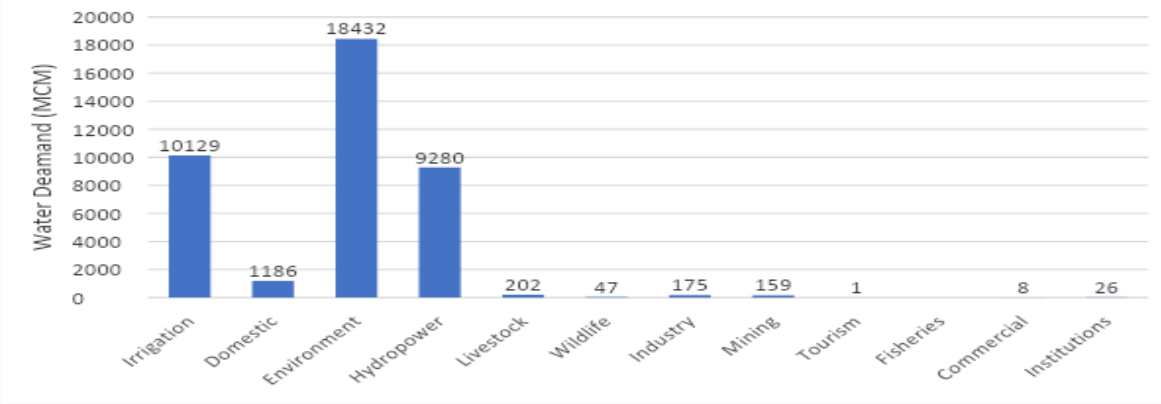


Table 3 shows the current and projected water demand for all the nine basins. Supply and demand projections indicate that demand for water will grow to 59 percent of the available supply by 2035. The highest projected water demand growth is found in the Rufiji Basin, Internal Drainage Basin, Lake Nyasa, and Pangani. The increasing demand in the basins is mainly influenced by increased demand for economic activities such as water for irrigation. The highest abstractions for irrigation are found in the Pangani, and Rufiji basins. Most hydropower projects are found in the Rufiji basin. Most abstractions for domestic purposes as well as for industries are found in the Wami Ruvu basin. As one assessment respondent from the MoW asserted: "…. *there is a challenge especially in the highly populated areas or areas where there is a lot of economic activity. That is why basins like Wami-Ruvu, Pangani, Rufiji are the most affected by degradation of water sources. If you go to basins like Nyasa basin you will notice that the destruction of water sources is not so severe because there is low population."*

Table 3: Available Water Resources and Projected Water Demand Across the Nine Water Basins of Tanzania[18]

Basin	Available Renewable Water Resources (MCM)		Total Water Demand (MCM)		Demand as % Availability	
	2012	2035	2012	2035	2012	2035
Rufiji	22,732	21,897	5,604	6,175	25%	28%
Ruvuma	11,916	12,116	4,987	5,561	42%	46%
Internal Drainage	6,869	6,572	5,051	6,134	74%	93%
Lake Nyasa	11,451	10,748	5,260	5,640	46%	52%
Lake Rukwa	6,195	5,982	3,347	4,834	54%	81%
Lake Tanganyika	11,968	11,638	4,065	4,861	34%	42%
Pangani	7,049	6,402	5,025	5,286	71%	83%
Wami Ruvu	4,207	4,057	1,585	2,852	38%	70%
Lake Victoria	11,301	10,894	3,959	4,146	35%	38%
Total/Average	**93,688**	**90,306**	**38,883**	**45,489**	**47%**	**59%**

Addressing Challenges Facing Water Resources Management

Several challenges threaten the availability and sustainability of water resources in Tanzania with various economic implications. These challenges include:

[18] Includes total available water (including surface water).

- **Rapid population increase and unplanned urbanization**: Population growth and growing need for better livelihoods is leading to rural-urban migration to fast growing cities including Dar es Salaam, Dodoma, Mbeya, Tanga, and Arusha. Urban service delivery in these municipalities cannot keep up with the growing demand. This may lead to risks of acute water shortages and rationing that can affect economic growth and public health.
- **Catchment mismanagement and unsustainable agricultural practices**: Catchment degradation and unsustainable land use practices remain a key threat to water resources. Deforestation remains a critical problem as subsistence farmers clear more land for farming. Overgrazing and culturally-inspired bush fires (*e.g.*, a tribe in Kigoma region believe the longer your bushfire burns, the longer you will live) contribute to the drying up of seasonal rivers. The underlying drivers of this water degradation are deep-rooted poverty, lack of land ownership and livelihood alternatives to subsistence agriculture, reduced incentives to invest in conservation activities, and limited access to financing for water-efficient irrigation practices. Over abstraction of water by upstream users, especially in the dry season in the Rufiji Basin, has been reported to cause rivers to dry, reaching zero flow for seasonal periods with significant impacts on downstream users. This includes the hydropower generation projects which have had a negative effect on water resources downstream, affecting biodiversity in the Ruaha National Park. Similar cases have been reported in the Katuma River catchment in the Lake Rukwa Basin where excessive water abstraction in the upstream areas has resulted in the loss of river channels affecting biodiversity in the Katavi National Park.
- **Pollution of water sources**: Water pollution from agricultural fertilizers, discharge of untreated wastewater especially from mines and factories, and other human activities is a threat to Tanzania's water resources. Many industries nationwide do not have proper on-site treatment facilities and discharge effluent directly into rivers and streams. The Lake Victoria Basin, with its significant number of mines, faces challenges with discharge of untreated effluent containing mercury residues and other heavy metals.
- **Sedimentation of Lake Victoria**: The Lake Victoria Water Basin Office reports that unregulated human activities, mainly farming on riparian lands in the river catchments feeding the lake, have led to increased sedimentation and siltation. The Lake Victoria Basin office posits that this increased sedimentation poses a risk to aquatic life and will most likely increase the cost of treating water as high turbidity water will be abstracted by the water utilities into their treatment plants.
- **Climate Change is further driving stress on water resources**. Climate change, manifested in increasing temporal and spatial variability in rainfall and temperature, is already having impacts on water resources in Tanzania. A recent economic update indicates that Tanzania's agricultural sector suffers an estimated US$ 200 million in average annual losses because of weather-related occurrences, largely due to drought. The most recent being an increase in aggregate food prices of 12.0 percent due to droughts in 2017.[19] In another example, a significant drought in 2009 resulted in the mortality of 80 percent of livestock in northern Tanzania, undermining the achievement of local and national food security and longer-term development. Climate change projections in the integrated water resources management and development plans (IWRMDPs) undertaken for five basins show that annual runoff rates will decrease substantially. In the Ruvuma, Lake Nyasa, and Lake Tanganyika basins, projections indicate a 2 percent decrease, while the Pangani and Internal Drainages basins are projected to experience

[19] WB, November 2017, Tanzania Economic Update,10th Edition.

decreased runoff rates of 27 percent and 17 percent respectively.[20]

Water Conservation and Demand Management – the Untapped Potential

To fulfill their mandates, BWBs are required to develop WRMDPs.

Lack of financing constraining WRM Plans: According to the KIs at the MoW, only six basins have completed their IWRMDPs. Wami Ruvu is in the final stages of development, Lake Victoria is in the initial stages, and Pangani has yet to start, mainly due to lack of funds. Financing is a major challenge facing WRM as it receives less budget in comparison to water supply. For example, in the 2017-2018 national budget, the water resources component of the water sector received only 9 percent of the total budget allocation as compared to 85 percent for rural and urban water supply services. Most DPs are also largely focused on water supply with very few projects identifiably supporting WRM. The USAID WARIDI project is working in the Wami Ruvu and Rufiji basins supporting community-based WRM, albeit at a small scale. WARIDI aims to strengthen governance by training BWB officers to collect, process, and analyze hydrological data. WARIDI is also supporting local community Water Users Associations (WUAs) to undertake catchment conservation measures. Other DPs intervening in WRM include Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH (GIZ) and United Nations Development Programme (UNDP). GIZ is supporting the basins with hydrological data collection and management and monitoring and evaluation (M&E) systems in the Lake Rukwa and Lake Nyasa basins. The UNDP, through the Global Environmental Facility (GEF) Small Grants Programme, is supporting community approaches to sustainable land use practices and protection of biodiversity as well as climate change mitigation and adaptation measures in the Wami-Ruvu basin and Zigi sub-catchment area.

Operational inefficiencies affecting WRM efforts: KIs from the BWBs interviewed noted that the performance of the basins is still inadequate. Currently, only four of the nine river basins can meet the revenue targets and cover at least 30 percent of their own current expenditure. These are the Rufiji, Wami Ruvu, Lake Victoria, and Pangani River basins. The BWBs are struggling to monitor water permit use and revenue collection. To increase revenue through water permit fees, the MoW conducted a water financing options study which identified novel approaches towards improving financing of water basins. This included adopted regulations allowing basins to set water user fees depending on the condition of the basin.

Lack of autonomy is affecting effectiveness of the BWBs. Currently, the BWBs are not autonomous. They still depend on the MoW for staff, financing, and other critical operational support. One of the common proposals made by different assessment respondents from the BWBs as well as the National Basins Advisory Board is to give the Basin Water Offices greater organizational autonomy for financing and operations, while also strengthening the mandate and oversight function of the National Basins Board on individual Basin Offices. Members of the National Basin Board interviewed were of the opinion that the current constitution of the National Basins Advisory board only gives the organization a technical advisory role to the MoW on an as-needed basis. To address this, the respondents suggested that the Advisory Board should be made an autonomous national water resources regulatory agency under the MoW—akin to the Energy and Water Utilities Regulatory Agency (EWURA). The current nine Basin Water Officers would then be brought under it as catchment offices. They assert that this would give the agency greater ability to effectively regulate, finance, and spearhead the management of Tanzania's water resources.

3.1.3 Linking WASH services and GoT Development Planning

[20] Japan International Cooperation Agency (JICA), 2018, The Project on Revision of National Irrigation Master Plan in the United Republic of Tanzania.

The framework for Tanzania's National water policy (NWP), which informs the design of its' WASH services, is anchored on the Tanzania Development Vision 2025 (TDV 2025). Both the NWP and the Water Sector Development Strategy (WSDP) – which sets out how the NWP will be implemented, highlight the enabling Role of WASH services in achieving the TDV2025 aspirations. The goal of the TDV2025 for WASH is access to safe water for all Tanzanians by 2025 through involvement of the private sector and empowering of local communities[21]. The TDV2025 also pledges to provide improved sanitation to 95% of the population by 2025.The Second Five Year Development Plan (FYDP II) 2016/17–2020/21[22], also recognizes that adequate WASH conditions for Tanzanians are a critical to economic development and transformation towards becoming a middle-income economy. In addition to the findings described in section 3.1.2 above which relates water resources management risks to the realization of the TDV2025, The GoT cite several challenges related to WASH service provision that threaten realization of the TDV2025 If not adequately addressed. Key among these are i) persistent large disparities between urban and rural areas, with regard to access and quality of water and sanitation facilities and services; ii) widening regional inequities in the WASH services provided by LGAs; iii) inadequate financial allocations and human resources and iv) a relatively new institutional arrangement that needs to be strengthened to deliver sustainable WASH services[23].

The FYDP II is built on three pillars of transformation namely Industrialization, Human Development and Implementation effectiveness. The plan recognizes that while agriculture underpins the envisaged industrialization pillar, the human development pillar emphasizes that realization of the growth aspirations is only as good as Tanzania having a human capital and productive workforce. The assessment shows a trend that focuses much of the water resources management interventions in Tanzania towards environment conservation and enhancing productivity – industrial and agricultural, while development of WASH infrastructure and management of services is more focused on improving social wellbeing and development of human the capital needed to realize the TDV2025. The GoT has developed the WSDP action plans, to improve the proportion of Tanzanians with access to WASH services in order to have a productive workforce.

Assessment question two discusses in detail, the challenges, current trends and future trajectory of WASH services in Tanzania.

3.2 ASSESSMENT QUESTION 2: HOW DO GOT'S NATIONAL DEVELOPMENT PRIORITIES AND GOALS IN WRM AND WASH AND AIMS OF THE INTERNATIONAL DONOR COMMUNITY ALIGN WITH THE SDGS AND WHAT ARE THE DESIGN IMPLICATIONS FOR USAID COLLABORATION AND COORDINATION WITH OTHERS IN THE INTERNATIONAL DONOR COMMUNITY?

This section presents findings on policy issues, constraints, risks, and enablers of the national water strategy in reaching SDG 6. The section sheds light on the current state of services coverage, institutional arrangements, and delivery structure of water services and provides a synthesis of critical gaps in institutional capacity for service delivery.

3.2.1 Tanzania's Water Sector Development Plans and Strategies

The National Water Policy of 2002 guides the realization of the objectives of the water supply and sanitation sector. While two acts, the Water Resources Management Act of 2009 and the newly enacted Water and Sanitation Act of 2019, legislate the policy, its implementation is largely operationalized through the WSDP, domiciled within the MoW.[24] The overall objective of the

[21] The United Republic of Tanzania, 1999.Tanzania Development Vision 2025
[22] The United Republic of Tanzania, June 2016. National five-year development plan 2016/17 – 2020/21
[23] The United Republic of Tanzania, June 2016. National five-year development plan 2016/17 – 2020/21
[24] https://www.maji.go.tz/pages/programme.

WSDP—which is designed to be implemented in three phases, Phase 1 (2007-2014), phase 2 (2014-2019), and phase 3 (2019-2025)—is to achieve universal access to water and sanitation by 2025. The program comprises four components: 1) WRM, 2) rural water supply, 3) urban water supply and sewerage, and 4) sanitation and hygiene. The results of the WSDP phases are tracked and reported through five indicators:

1. Number of villages signing commitments to construct improved sanitation facilities for all village households.
2. Sanitation service providers such as a hardware shop or masons established per village to provide such services to villagers.
3. Schools achieving target latrines to students ratio.
4. Number of urban water supply and sanitation house connections made, and public kiosks constructed.
5. Institutional strengthening and capacity building for various institutions with a mandate to deliver on the expected results of the WSDP.[25]

The first phase of the WSDP (WSDP-1) was implemented from 2006 to 2015, with a total investment of US $1.4 billion; about 40 percent of the funds went to rural areas. In 2016, the GoT launched the second phase of the program (WSDP-2) with an ambitious target of achieving 80 percent access to improved water supply and 75 percent access to improved sanitation in rural areas by 2019.[26]

Evaluations conducted at the end of WSDP Phase 1, both by the WB and by Oxford Policy Management (OPM) highlighted the following eight issues as key concerns that stymied achievement of the Phase 1 targets: 1) only 2 percent of the budget was allocated for rural sanitation; 2) few resources were allocated for water scheme maintenance, repair, and replacement; 3) only about 20 percent of the villages with new infrastructure had a registered community-owned water supply organization (COWSO), most lacking capacity in financial and operational management; 4) lack of quality assurance for design and construction, and poor standardization of designs and components leading to low realization of value for money for new water supply infrastructure; 5) unreliable data and weaknesses in monitoring of sustainability hampered addressing the growing backlog of non-functional schemes; 6) insufficient resources were allocated to support and train district-level staff on the technical and management aspects of WASH services; 7) institutional fragmentation, lack of policy coherence and weaknesses in coordination between local DCs and the Ministries of Water and Finance, hampering efficient release of funds; and 8) the MoW focused more on building water supply infrastructure allocating insufficient resources towards WRM.[27]

While the design of WSDP 2 has taken these concerns into account, most of the issues have only been marginally addressed and continue to negatively impact the implementation of the current phase of the WSDP. For example, political interference undermines the enforcement of regulation and allocation of budget for the implementation of water supply projects which in some cases rewards “politically-favored” districts at the expense of districts in greater need. Weak implementation capacity, insufficient funding allocation[28], and weaknesses in policy coordination

[25] MoW. July 2014. Water Sector Development Programme Phase II (2014/2015 – 2018/2019).

[26] MoW, July 2014, Water Sector Development Programme Phase II (2014/2015 – 2018/2019).

[27] OPM for the MoW, May 2013, Water Sector Development Programme 2007-2014 – Evaluation of Phase I, Final Report.

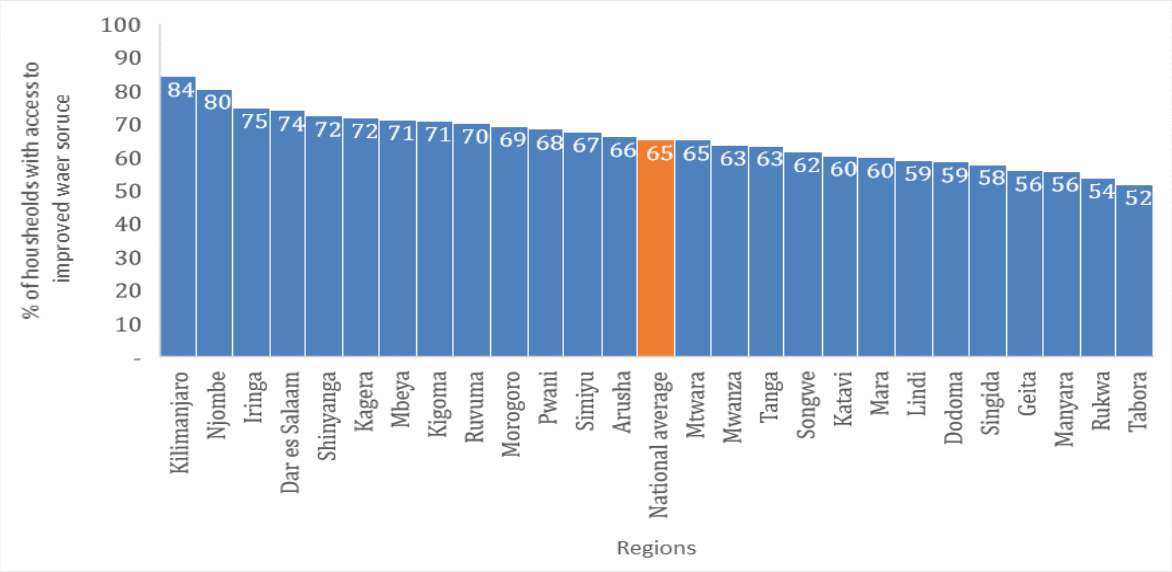
[28] The Ngor Declaration on Sanitation and Hygiene adopted by the African Ministers responsible for sanitation and hygiene on 27 May 2015 at AfricaSan4, including Tanzania, committed to establish and

mechanisms undermine sector strategies.

3.2.2 Current Status of Urban and Rural WASH Services

Access to Water Supply: Over the past decade, access to safe water sources in Tanzania has improved, albeit slowly. According to the Tanzania Household Budget Surveys (HBSs), the proportion of population with access to drinking water increased from 52 percent to 73 percent between 2007 and 2018. Rural access averaged 65 percent compared to 87.6 percent in urban areas.[29] Rural water access varies considerably across different regions (see Figure 7). Applying the SDG standard of access to improved water services (that improved water be reached within 30 minutes), reduces the rate to 35 percent (since the average time to collect water in Tanzania is 40 minutes).[30] The WB reports 10 percent of Tanzanians have within-dwelling connections to an improved water source.[31]

Figure 7: Access to Improved Water Services Across Regions



Source: Tanzania Rural Water Supply and Sanitation Authority (RUWASA), July 2019

Non-functionality of existing water points remains the most critical challenge for WASH services in Tanzania. The GoT periodically undertakes a national water point mapping to establish a comprehensive database on the functionality status of water points. Figure 8 shows the results of a comprehensive assessment of 88,000 water points in 159 LGAs in Tanzania carried out in 2016. Overall, 42 percent of the existing systems were non-functional. About 32 percent of rural water schemes were non-functional and another 10 percent were in need of significant rehabilitation.[32]

A detailed diagnostics of WASH poverty in Tanzania by the WB established that, in addition to poor technology choice and in some cases hydrological factors, this high failure rate of rural water points is attributed to an absence of a clear strategy for ensuring maintenance and sustainability

track sanitation and hygiene budget lines that consistently increase annually to reach a minimum of 0.5% GDP by 2020.

[29] Ministry of Finance and Planning [Tanzania Mainland] and NBS, 2019, Tanzania Mainland Household Budget Survey 2017-18, Key Indicators Report, Dodoma, Tanzania.

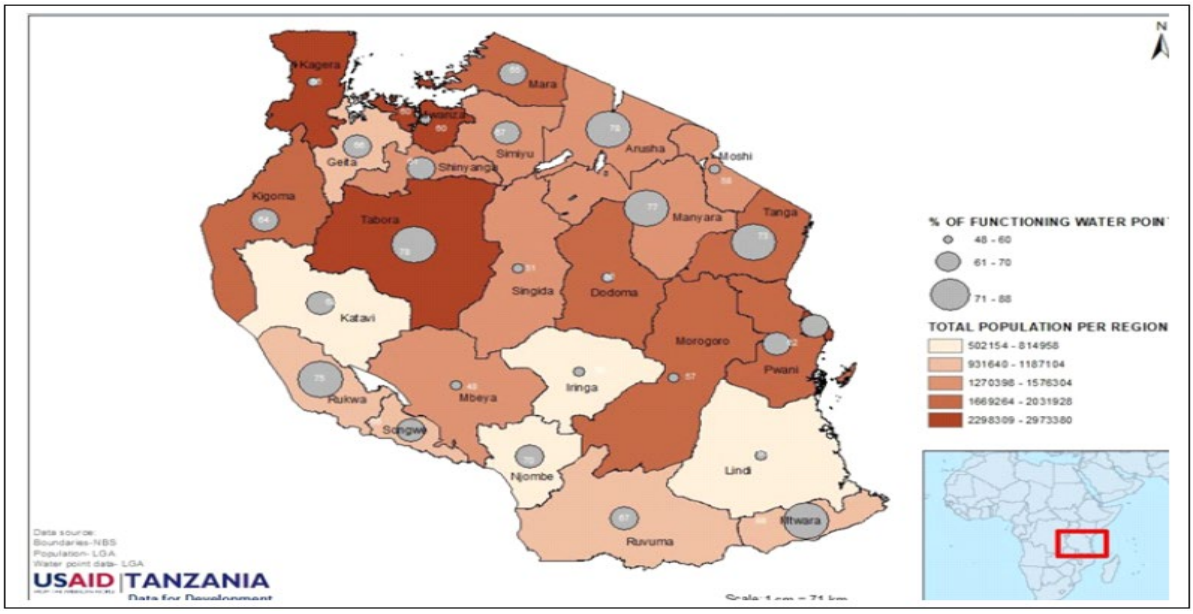
[30] WB, June 2017, Tanzania WASH Poverty Diagnostic Report.

[31] Rural Water in Tanzania-High Investments-Low-Returns, WB, 2017.

[32] Ministry of Water & Irrigation. 2017. Water Point status in Rural areas by Region - District/LGAs.

of existing water points.[33] The report observed that LGAs allocated nearly all their financial and human resources for the construction of new water points, disregarding the essential tasks of maintenance, building capacity, monitoring, and providing technical backstopping to sustain functionality. MoW officials interviewed during the assessment attributed the high failure rate to a lack of sufficient capacity of local institutions within the DCs and skewed incentives for spending on new infrastructure.

Figure 8: Proportion of Functional Rural Water Points Per Region in Tanzania



Source: MoW, 2017.

The MoW recognizes that these challenges, if not exhaustively addressed, stand in the way of achieving the WSDP II targets. The Ministry is implementing a national rural water sustainability strategy (July 2015 to June 2020) which adopts a three-pronged approach to ensuring sustainable functionality of rural water supply system. These are:

1. Ensuring rehabilitation of existing non-functional water points;
2. Constructing new points where no point exists; and
3. Applying lessons learned on the underlying causes of water point failure to design subsequent interventions and invest in improving sustainability.[34]

[33] WB, 2017, Tanzania WASH Poverty Diagnostics.

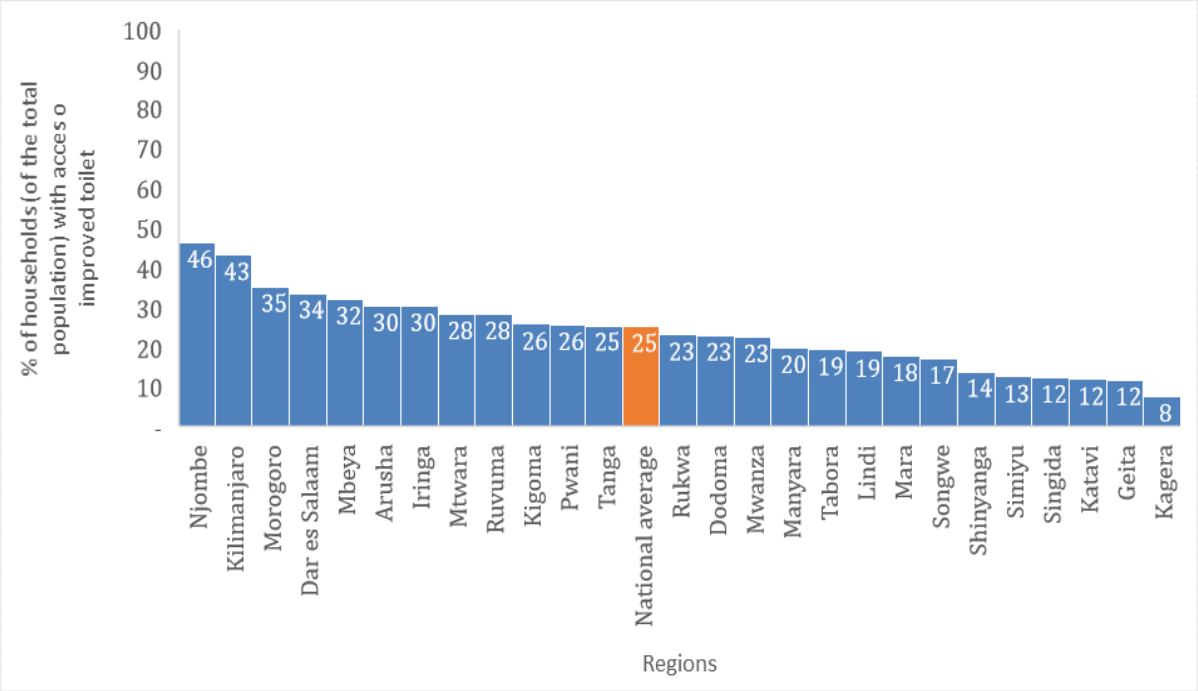
[34] MoW, 2015, National Rural Water Sustainability Strategy, Ministry of Water, Dar es Salaam-Tanzania, 2015-2020.

Access to Sanitation Facilities

The National Sanitation Campaign (NSC)—a component of the Water Sector Development Program (WSDP), under the Ministry of Health, Community Development, Gender, Elderly, and Children (MoHCDGEC)—guides the improvement of sanitation and public health conditions in Tanzania. The GoT has undertaken to apply a combination of Community-Led Total Sanitation (CLTS), social marketing, behavior change communication (BCC), and training masons (*fundis*) to build improved latrines and provide schools and health facilities with adequate WASH facilities.

Access to improved toilet facility varies across regions. The 2017-2018 HBS shows that only 25.3 percent of Tanzanians had access to an improved toilet facility at the time of the survey (see Figure 9), which clearly demonstrates unattainability of the WSDP 2 target on improved toilet facilities of 75 percent by 2019. There is also a considerable variation across the regions with only a paltry 7.7 percent of the households in the Kagera region having access to an improved sanitation facility. There are 14 regions where households with access to an improved toilet is less than the national average of 25 percent.

Figure 9: Proportion of Households with Access to an Improved Toilet Across Different Regions of Tanzania



Source: Tanzania Mainland 2017-18 HBS.

Figures 10 and 11 compare the proportion of households with access to an improved toilet and those with access to an improved water facility. The figures illustrate that access to water supply performs considerably better than access to an improved toilet facility. Underfunding of sanitation has contributed to disparity in access levels for sanitation compared to water. Out of the US $560 million (40 percent of total allocations) spent in rural WASH interventions under the WSDP 1, only US $24.2 million (less than 2 percent) was allocated for sanitation. The other factor cited as contributing to the low proportions of households having an improved toilet is the GoT's policy of not subsidizing construction of household-level latrines.

Figure 10: Household Access to Improved Water Supply and Improved Toilets Across Different Regions of Tanzania

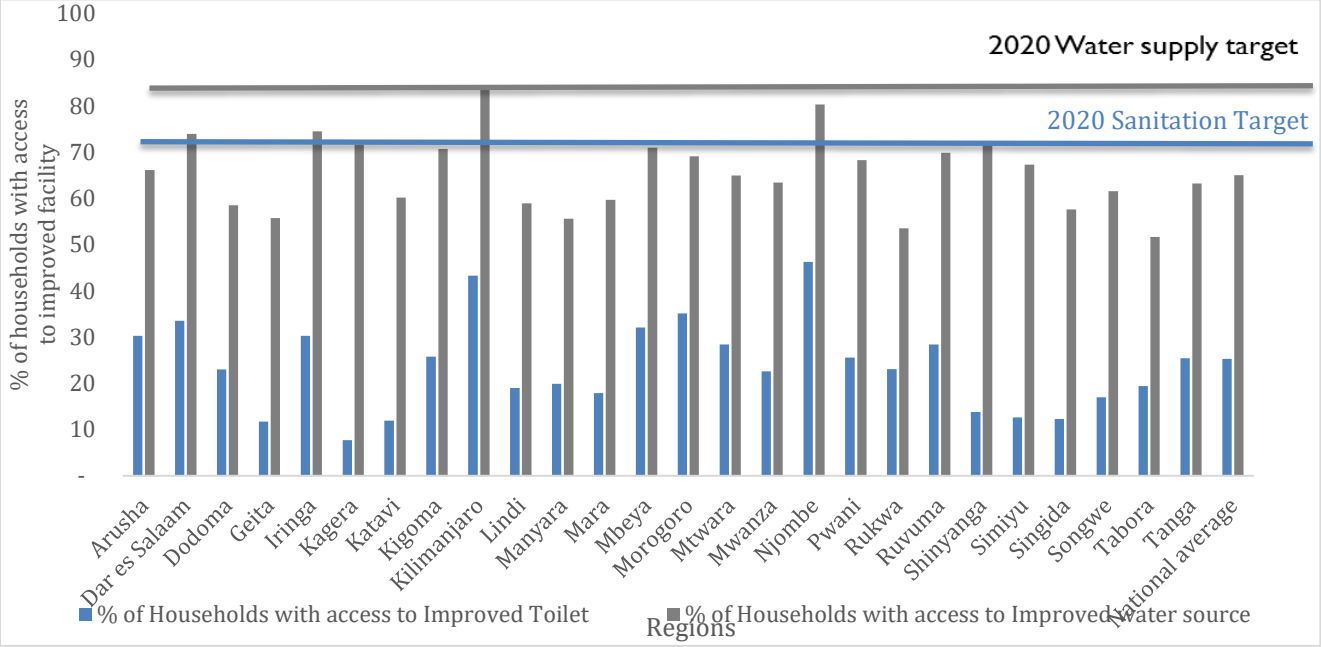
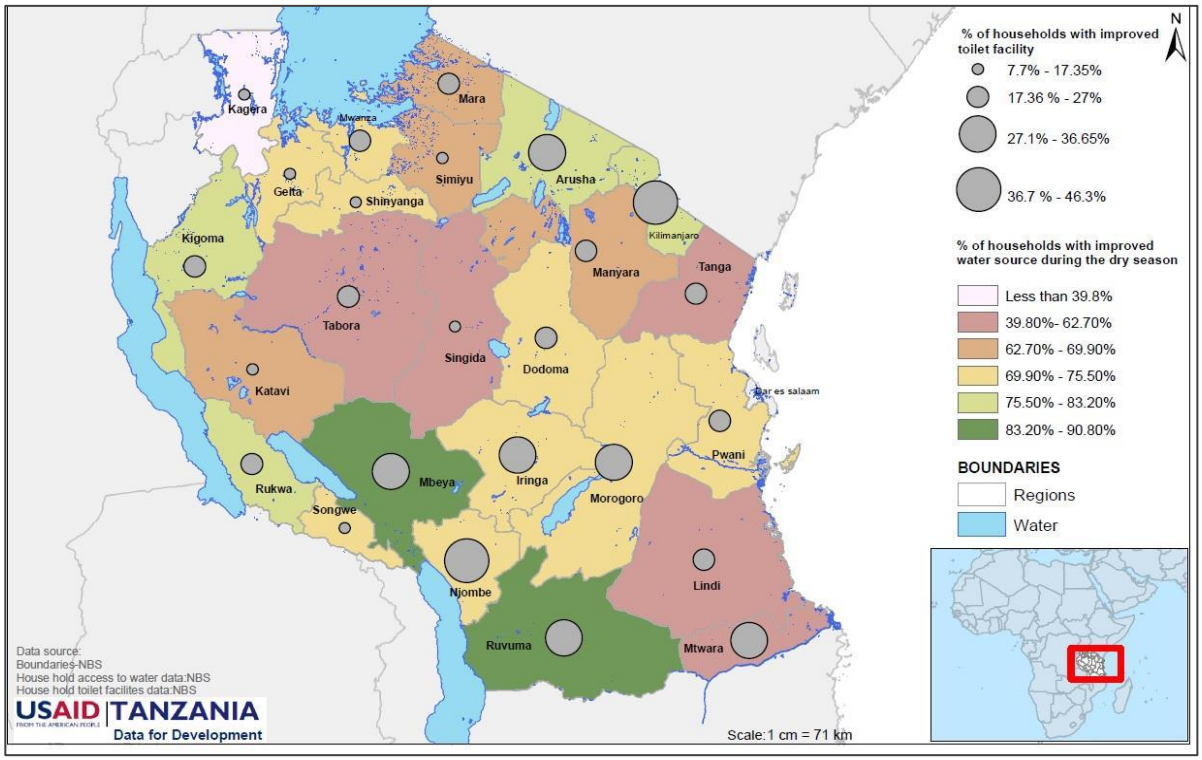


Figure 11: Map of Access to Improved Toilets and Water Sources



During the assessment, there seemed to be a difference in perspective among GoT officials on what quality of household latrines should be considered as an improved toilet. The SDG 6 defines an improved sanitation facility as one that hygienically separates human excreta from human contact.[35] While some officials interviewed during the assessment indicated that an "improved" latrine must be entirely built of permanent masonry or concrete materials, including the latrine slab and superstructure, the perspective of other officials was that any latrine with *"a solid strong slab… made out of concrete, wood or plastic materials"* qualifies as an improved latrine. The latter more flexible definition is more in alignment with the SDG 6 definition. Photo 2 shows images of two types of household latrines in a village in Kibondo district—one made out of masonry superstructure and one made out of local earthen material. The same challenge was highlighted during the evaluation of the Phase 1 of the NSC. The evaluation reported that many existing toilets in rural areas are neither durable nor hygienic. The NSC, in partnership with NGOs such as Water Aid and Netherlands Development Organization (SNV), adopted initiatives to encourage and enable households to upgrade to durable, improved facilities through the private sector to readily provide sanitation products such as durable latrine slabs and trained local masons to fabricate low-cost concrete latrine slabs.

Photo 2: Different Types of Household Latrines in the Kigoma Region

Source: Oxfam, 2019.

Under financing, slow disbursements and unpredictability of funding jeopardize long-term planning for sanitation. The evaluation of the NSC-1 (2012-2015) also listed the following challenges: weak supply chains for sanitation products, cancelation of the BCC component of the NSC; and lack of incentives for local public health staff to monitor outcomes and coordinate NSC activities with other relevant GoT departments.

GoT officials interviewed in the assessment also highlight that, due to funding constraints, the NSC program tends to operate on the basis of short-term (annual) plans which makes it difficult

[35] United Nations Children's Fund (UNICEF) & World Health Organization (WHO), 2018 ANNUAL REPORT – Joint Monitoring Programme for Water Supply, Sanitation, and Hygiene (JMP).

to plan sanitation activities for the long term.

WASH in Schools and Health Care Facilities

A comprehensive survey of 2,700 schools in Tanzania carried out jointly by the United Nations Children's Fund (UNICEF), Water Aid, and SNV in 2009 indicated that 6 percent of the schools had no latrines, 84 percent had no handwashing facilities, 86 percent of those with handwashing facilities have no sustainable water connection, and 38 percent of the schools had no water supply at all.[36] In the effort to respond to the dissatisfaction with WASH services in schools, the assessment team discovered the report, the GoT developed the Tanzania National Strategic Plan for School Water, Sanitation, and Hygiene (SWASH), 2012-2017.[37] SWASH provides a framework for the implementation of School WASH activities for the period of 2012-2017. The plan had a target of a 50 percent increase in WASH facilities in schools by 2017.

Challenges that impeded the performance of SWASH included late and low levels of disbursement of funds to the LGAs as well as weak coordination between different agencies. Tensions between national government agencies (*i.e*., the Ministry of Health, Ministry of Education, and President's Office-Regional Administration and Local Governments [PO-RALG]) emanating from a lack of clarity of roles as well as responsibility for coordinating the flow of funds at the national level. At the local level, weakness in coordination between the "District Engineers" office and the Department of Health and Education office was seen to contribute to delays in construction of WASH infrastructure.

While about US $7 million was allocated to the schools WASH sub-component under the NSC, there were several challenges to the realization of the targets. A survey of 4,000 schools across different regions in Tanzania in 2018 revealed that although many schools had improved their sanitation status, they did not meet national standards. Deficiencies observed include: 1) low ratio of available latrines to students compared to the policy requirement in most schools (*e.g*., a school with 2,000 students was found to have only six pit latrines, three for boys and three for girls, while in other schools, one latrine block was being shared by both boys and girls); 2) poor quality of infrastructure construction (*e.g*., some schools had latrines lacking doors); and 3) most schools had installed handwashing stations without a sustainable water source thus making them useless. The study also revealed that many school heads expressed facing challenges in accessing funds for operation and maintenance of school WASH facilities.

WASH in health facilities

A 2016 National Institute for Medical Research (NIMR) assessment of WASH in health care facilities in the Tanzania mainland revealed that while most major hospitals (83 percent) had piped water, only 40 percent of lower level community health facilities had improved piped water connectivity.[38] Many community health care facilities still rely on water from outside standpipes/domestic water points or are supplied by private sector water vendors. The assessment indicated that all the health facilities assessed had functional toilet facilities even though the accuracy of this could not be confirmed from an alternative evidence source.

[36] SNV, UNICEF, & Water Aid. (2010). School Water, Sanitation and Hygiene Mapping in Tanzania: Consolidated National Report.

[37] Ministry of Education and Vocational training. 2012. National strategic plan for School Water, Sanitation and Hygiene (SWASH) 2012-2017.

[38] NIMR. 2016. Water, Sanitation and Hygiene situation in health care facilities in Tanzania mainland and way forward.

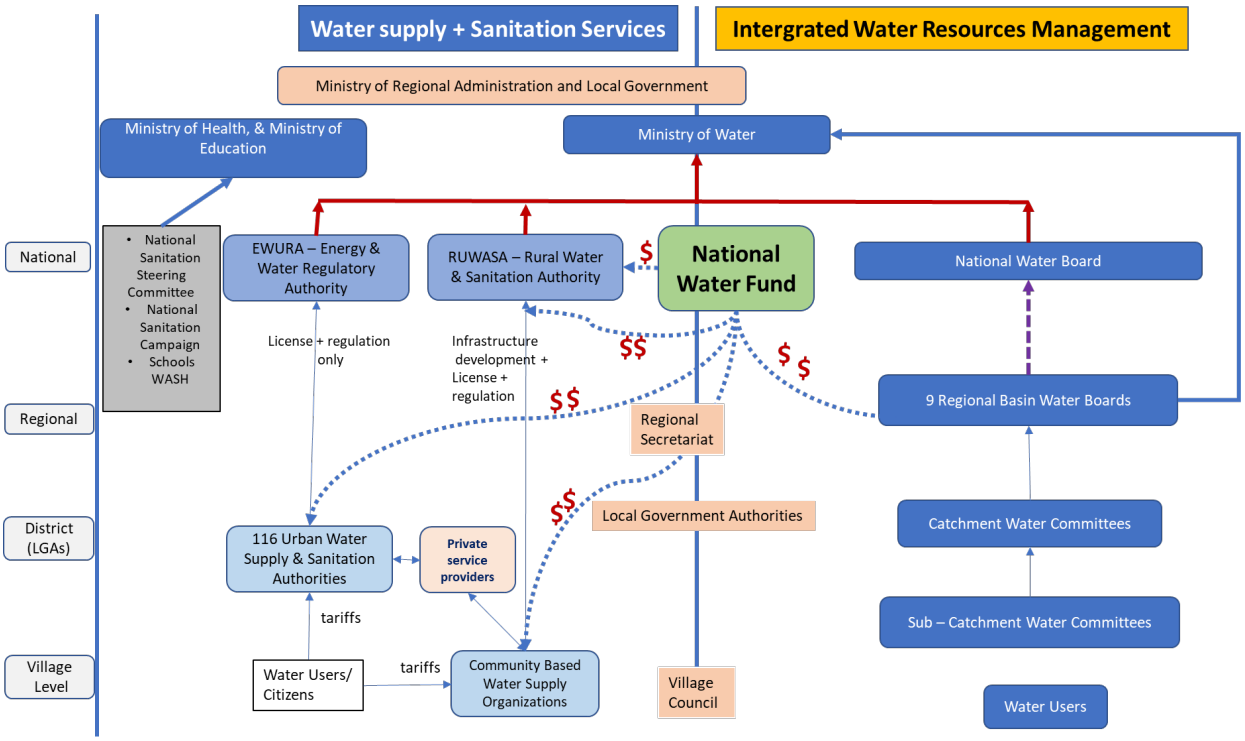
3.2.3 Institutional and Structural Governance of Tanzania's Water Sector

Legislative and Policy Framework for Tanzania's Water Sector

The 2019 Water Act: To realize the results envisioned under the WSDP, the GoT instituted a series of reforms aimed to improve legislative and policy coherence and state capacity to deliver efficient and sustainable water supply and sanitation services to its citizens. These reforms culminated in the Water Supply and Sanitation Act of 2019. The Act, whose development involved extensive consultations with different GoT partners and other stakeholders, sets out the institutional arrangements for the supply of safe water and provision of sanitations services to the people of Tanzania. Conservation, development, management, and control of water resources are guided by the Water Resources Management Act of 2009. These policies and legislations are summarized in Annex 5.

Organization of Tanzania's Water Sector: The provision of WASH services and the management of water resources requires a range of multisectoral inputs that creates a complex array of stakeholders with various roles and responsibilities at different levels of the GoT governance structure (see Figure 12).

Figure 12: Institutional Structure of Tanzania Water Sector



While the GoT through the MoW has endeavored to support communication and coordination among these actors, there are remaining challenges to integrated planning and service delivery. Technical and managerial capacity gaps and lack of coordination between actors at the national, regional, district, and community levels prevent achievement of WRM and WASH targets. While the MoW is responsible for overall strategy, policy directions and resource mobilization, it relies on other Ministries, Departments, and Agencies (MDAs), as well as regional, district, and community-level institutions to deliver results on WRM and WASH (see Box 3).

Box 3: Key Institutions With Mandates in the Water Sector in Tanzania

- **Ministry of Water**: Responsible for formulation of national policies and strategies for the provision of water supply, sanitation services and management of water resources and for ensuring the execution by authorities or persons under the control of the MoW.
- **Ministry of Health, Community Development, Gender, Elderly, and Children**: Coordinating the implementation of the NSC under the WSDP.
- **Ministry of Education Science and Technology (MoEST)**: Holds overall responsibility for formulating strategies, guidelines, and delivery of SWASH under the NSC in coordination with the MoW, MoHCDGEC, and PO-RALG.
- **President's Office, Regional Administration and Local Government**: Through the Regional Secretariat and the LGAs, PO-RALG is responsible for creating a conducive environment for community and private sector participation in development, operation, and management of water supply and sanitation services; and Water Authorities and the Rural Water Supply and Sanitation Agency (RUWASA) in the execution of functions connected with provisions of water supply and sanitation services.
- **Energy and Water Utilities Regulatory Authority**: Responsible for technical and economic regulation of water supply and sanitation services.
- **Rural Water Supply and Sanitation Authority**: Responsible for development and sustainable management of rural water supply and sanitation projects.
- **Urban Water Supply and Sanitation Authorities (UWSSAs)**: On the conditions of a license issued by EWURA, UWSSAs are responsible for the efficient and economical provision of water supply and sanitation services in authorized service areas.
- **National Water Fund (NWF)**: To mobilize resources and provide investment support for water service provision, and the management of catchment areas serving water supply abstractions.
- **National Water Basin Advisory Board**: An advisory board to the Minister for Water on matters related to multi-sectoral coordination in integrated water resources planning and management as well as resolution of national and international water conflicts.
- **Regional Water Basin Boards**: Responsible for the preparation of basin water resources management plans, projects, budgets, and an implementation strategy. Also approve, issue, and revoke water use and discharge permits.
- **Community-Based Water Supply Organizations (CBWSOs)**: Can own movable and immovable properties including public taps and waterworks; manage, operate, and maintain public taps and waterworks; and provide an adequate and safe supply of water to their consumers.
- **Water Users Associations**: Manage, distribute, and conserve water from a source used jointly by the members of the WUA; resolve conflicts between members of the association related to the joint use of a water resource; and collect water user fees on behalf of the BWB.
- **Village Council (VC)**: Operating under the LGA, the VC promotes the establishment of the CBWSO; co-ordinates CBWSO budgets with village council budgets; and resolves conflicts within the CBWSO.

Charting a New Course for the Water Supply and Sanitation Sector

Prior to the Water Supply and Sanitation Act of 2019, structures for water supply and sanitation services, like other public services in Tanzania, were governed under the regional administrative structure. Under the arrangement, the local DCs, headed by a District Executive Director (DED) were responsible for implementation of WASH infrastructure works as well as overseeing operations and maintenance of installed facilities. The District Water Engineer (DWE) was reporting directly to the DED while the COWSOs were registered and supervised directly by the DED's office through the DWE. With the enactment of the new 2019 Act, Tanzania has undergone a significant structural reform aimed at improving the effectiveness and sustainability of water supply and sanitation services for urban and rural areas. This includes the establishment of a new organization—the RUWASA—to be directly responsible for development of water infrastructure

in rural areas and supervise their operations and maintenance, as well as a utility aggregation and clustering policy to improve urban water services.

Rural WASH Services Delivery

Under the new structure, the former DWEs, now called District Water Managers (DWMs), are redeployed as staff of the RUWASA reporting to the Regional RUWASA manager who in turn reports to the MoW through the Director General of RUWASA (whereas earlier where they reported to the PO-RALG through the DEDs). Most respondents interviewed confirmed that LGAs no longer have direct responsibility for infrastructure development or operations and maintenance of rural water and sanitation services apart from general oversight. Box 4 below summarizes the key functions of the RUWASA.

Box 4: Functions and Responsibilities of the RUWASA as defined by the Water Supply and Sanitation Act of 2019

1. Plan, design, construct, and supervise rural water supply projects.
2. Conduct ground water survey including prospecting and explorations and undertake drilling operation including water well flushing and pumping tests, and rehabilitation of water wells.
3. Design and construct dams of different types and carry out geotechnical and soil investigation for dam construction and other civil engineering structures.
4. Monitor and evaluate the performance of community organizations in relation to rural water supply and sanitation services.
5. Promote and sensitize rural communities on sanitation and hygiene education and practice as well as protection and conservation of rural water sources.
6. Provide financial and technical support to community organizations for major maintenance of rural water schemes.
7. Provide support to community organizations in relation to management, operation, and maintenance of rural water supply schemes.
8. Advise the Minister on issues related to rural water supply and sanitation.
9. Facilitate participation of communities in the identification, planning, construction, and management of rural water and sanitation projects.
10. Facilitate private sector engagement in the provision of rural water supply and sanitation services.
11. Facilitate training and capacity building to community organizations in financial, technical, and management aspects of rural water supply schemes.
12. Register and regulate the performance of community organizations according to the water Act and Regulations made by the Minister.

The RUWASA is expected to both develop infrastructure and regulate rural service providers. The RUWASA's role under the act suggests that it will play a role in infrastructure development as well as a regulatory role for small community-based water service providers. Community organizations managing rural water schemes are required to reregister under RUWASA as CBWSOs. The Act specifies that EWURA will regulate the commercial UWSSAs. The law is silent, however, on the role of EWURA as a regulator of small community-based water providers.

Discussions with different KIs highlighted stakeholder views on some of the challenges the RUWASA is expected to face in delivering on its broad mandate for rural water supply and sanitation. First, most of the community organizations the RUWASA will be overseeing lack the necessary technical and financial skillsets to operate as professional water utilities. Indeed, one of the major criticisms, globally, in rural WASH services has been that the narrative of community ownership and empowerment does not account for the challenges that managing a water scheme

entails. The critics of community-based water management often assert that rather than blaming failure of rural water schemes on the communities' lack of (technical) skills, low willingness to pay, or poor governance structures, the players installing infrastructure should provide ongoing solutions for the more difficult part of water provision (*i.e.*, long-term operations and maintenance). The GoT has responded to this challenge by establishing the RUWASA as a professional management organization for rural water services to support communities in Tanzania.

The stakeholders highlighted the following as some of the most urgent opportunities available for RUWASA to drive change in how rural water services are managed in Tanzania:

1. Supporting existing CBWSOs to establish offices and providing them with necessary work equipment and spare parts—at the moment, most CBWSOs do not have offices or equipment and work from government offices, *e.g.*, from ward executive officer's offices.
2. Providing technical and management skills to CBWSOs, including: financial management and reporting, how to maintain pumps, how to run pumps, and all the technical needs that come with water projects.
3. Providing communities with guidance on leadership selection, the imminent leadership risk that RUWASA will be expected to address. As one respondent said: *"if you leave villagers to select CBSWOs committee members, they will just look at the person who is influential and trustworthy in the community, and not much considering this is skilled position,…and sometimes they will choose more wealth person in the community, who they think won't disappear with the money."*
4. Overcoming political interference in management of rural water services. With the former COWSOs there was also a lot of political interference at the community level that has been seen to affect the project's intention to build and nurture skills at the community level for the members.

Transition Phase: It is barely six months since the establishment of the RUWASA and it is not yet clear what the ultimate organizational structure will look like. It has yet to fill key staff positions in the headquarters, regional, and district offices which are essential for its effective functioning. It is expected that the RUWASA will undergo several transitional periods and restructuring on how best to deliver on its mandate—ensuring (through providing oversight and technical support to COBWOSOs) that more than 200,000 rural water schemes located in thousands of villages across 26 regions over an area of 881,289 km^2 in mainland Tanzania are functional while constructing new ones. This will call for a significant need for continuous technical assistance and increased capacity of staff who have been redeployed to RUWASA from the LGAs, urban water authorities, and from the MoW. Some of the capacity development needs include: 1) tailor-made training for water engineering professionals to enable engineers to deal with contemporary issues and gain soft skills in design work, contract management, and supervisory roles; 2) leadership and management skills; and 3) contract and procurement management skills. According to one of the senior RUWASA managers interviewed:

> *"I can say that we have two major areas of concern; one is on the part of the professionals themselves, the Engineers. There is a very big gap in Engineering capacity…there is a very big problem with the capacity of our Engineers because most of them were involved in the regional local government where their task was not to design, but mostly to review designs by consultants...Most of these tasks were designed by the private sector and built by the private sector. So, most of these government engineers have practiced little actual engineering since they got out of college. And unfortunately, when they were employed in the districts most of them were juniors; they had very little practice in their profession. But due to the lack of Engineers, they were assigned to official positions and once one is given*

an official position, practicing Engineering becomes very rare…Secondly, most of the RUWASA employees are engineers, the agency will need to employ other professionals to effectively perform its mandate."

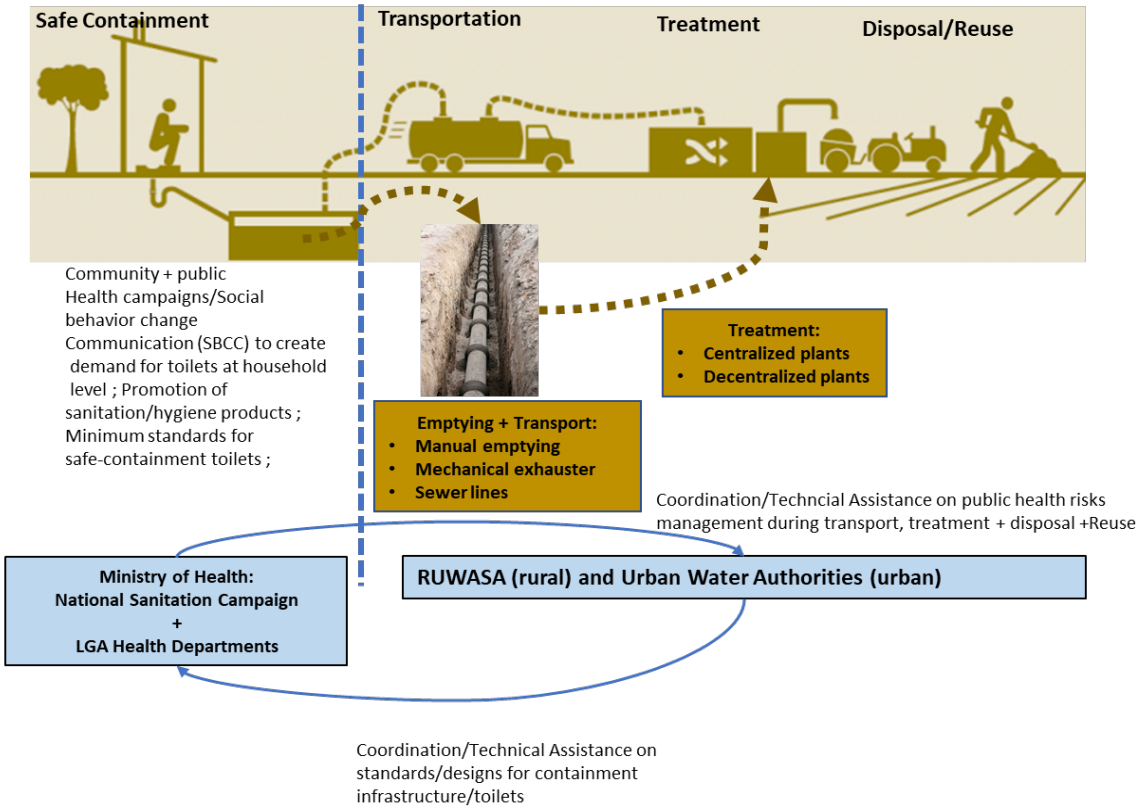
One of the key concerns observed during the assessment is that financial resources for the RUWASA to effectively undertake its role is still not guaranteed. CBWSOs are expected to grow and become operationally sustainable on their own; this is not likely to happen in the immediate future. The RUWASA will be expected, for example, to hire technicians to be sent to rural water schemes across the country. The current plan is to hire one technician for every multi-village water scheme to provide technical extension support to CBWSOs. This and other functions such as infrastructure development for the water schemes will call for a significant amount of budgetary allocation to the RUWASA to operationalize.

Another challenge highlighted by stakeholders during the assessment is a possible institutional overlap with the MoHCDGEC, MoEST, LGAs, and RUWASA in the responsibility for planning and building of sanitation facilities in rural areas. The RUWASA's mandate according to the act encompasses both rural water supply and sanitation. Indications from interviews with RUWASA managers is that they are currently more focused on water supply infrastructure despite the fact that the RUWASA is expected to build sanitation infrastructure as well. As a respondent from the RUWASA interviewed pointed out: "*Our main responsibility is to invest in the construction of water projects in the rural areas, and we are also responsible to put in place management structures in districts and villages as well as to regulate. Of course, there is a debate going on how we'll coordinate with other agencies. We are still figuring this out."*

While the roles of the RUWASA, LGAs, MoHCDGEC, and MoEST with regard to sanitation services are defined in existing laws and policies, some adjustments to the new structural changes will be critical for their success, including establishing who has authority to make decisions on sanitation infrastructure. The approval of the PO-RALG through the LGA on certain aspects of both water supply and sanitation services is a requirement despite the RUWASA reporting directly to the MoW. Figure 13 is a summarization of sanitation-related roles interface as described by different stakeholders interviewed.

The RUWASA's mandate on sanitation largely lies on developing the necessary infrastructure for fecal sludge transportation and treatment. The MoHCDGEC is the lead implementing agency for the NSC and is largely responsible for demand creation for households to acquire improved sanitation facilities for fecal containment through BCC, while MoEST supports school sanitation. Public health risk management is a cross-cutting role; the RUWASA, UWSSAs, LGAs' health departments, and LGA departments for education (for schools WASH) are all expected to coordinate on this aspect. Some stakeholders including GoT agencies and departments report lack of clarity on who is ultimately responsible for what. Figure 13 conveys the coordination of sanitation across GoT agencies.

Figure 13: Coordination of Sanitation Services Related Between Health Agencies and RUWASA



Source: Author's own creation from KII discussions.

Urban WASH Services Delivery

Room for improving the performance of urban water utilities: In Tanzania, provision of water supply and sanitation services in major cities, district headquarters, and townships are organized through publicly owned UWSSAs. These authorities are registered as limited liability companies where the public authority, mostly LGAs, holds 100 percent of shares. These UWSSAs are regulated by a national state agency—the EWURA—which groups UWSSAs into two broad categories: Regional and National Project UWSSAs (larger cities and towns) and District and Township (councils) UWSSAs (district headquarters and small townships). These are further classified into four categories based on their financial capabilities (see Box 5). According to the last performance report of water utilities in Tanzania released by the EWURA, there are 116 UWSSAs in Tanzania: 26 Regional UWSSAs, eight National Project WSSAs, 68 District headquarters UWSSAs, and 14 Townships UWSSAs operating in smaller townships that are not necessarily district headquarters.[39]

[39] EWURA. December 2018. Water Utilities Performance Review Report for the FY 2017-2018.

Box 5: Financial Capability Classification of Regional and National Project UWSSAs

Category AA: Water utilities with water service coverage of more than 85 percent and meet operation, maintenance costs, depreciation, and return on investment

Category A: Water utilities with water service coverage of more than 75 percent and meet all operation, maintenance, and depreciation costs

Category B: Water utilities with water service coverage of more than 65 percent and meet all operation and maintenance costs

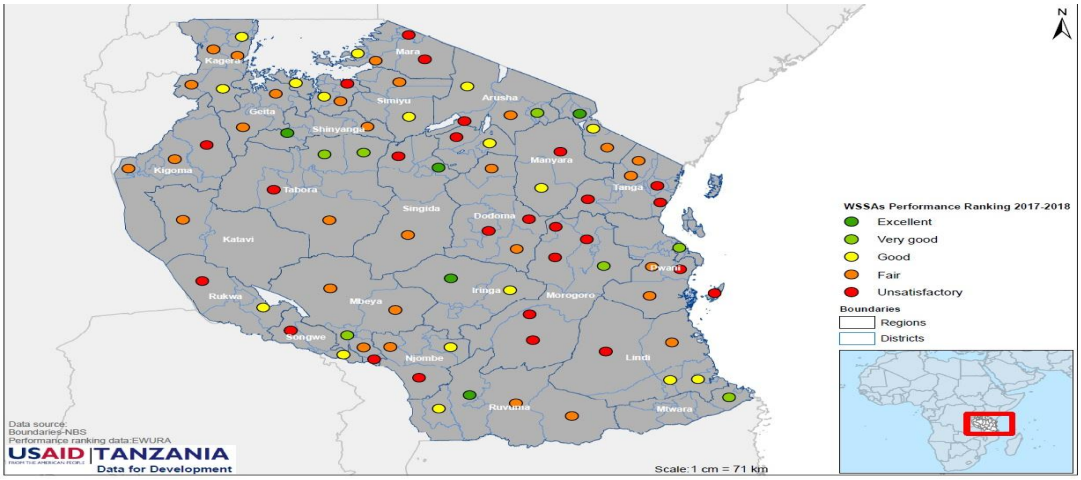
Category C: Water utilities with water service coverage of less than 65 percent and meet operation and maintenance costs except part of plant electricity costs as shall be determined in the Memorandum of Understanding (MOU)

Source: EWURA, 2018.

Clustering to improve services for urban residents: A key structural reform in the sector is the ongoing utility aggregation through clustering to improve urban WASH services. While not entirely a new change in the sector, the MoW is scaling-up clustering of Urban Water Authorities in district headquarters and small towns under 26 Regional UWSSAs. This is expected to improve revenue collection, enable sharing of experiences in management and technical operations, and reduce operating costs. Pilot clustering had already started in Tanga, Morogoro, Mbeya, and Moshi. In the Morogoro Region, the Morogoro UWSSA is in the process of clustering with the small towns of Mvomero and Dakawa. In the Tanga Region, the Tanga UWSSA is in the process of clustering with Muheza, Korogwe, and Pangani. In the Mwanza Region, in the long run, many of the councils will be merged into regional UWSSAs. For example, the Mwanza Urban Water Supply and Sanitation Authority (MWAUWASA) is taking over the service areas of Ukerewe/Nansio, Magu, and Ngudu urban water authorities. In the Songwe region, Vwawa and Mlowo councils were merged into a single Vwawa-Mlowo Regional UWSSA. At the time of the assessment, the MoW was in the process of developing specific guidelines to complete the aggregation strategy.

The performance of the UWSSAs over the period 2015 to 2018 shows a mix of improving operations while financial status is deteriorating. Figure 14 shows the overall performance ranking for all UWSSAs released by the EWURA for the financial year (FY) 2017-2018.

Figure 14: Performance Ranking of Urban Water Utilities in Tanzania for FY 2017-201840



The three top challenges facing UWSSAs have been identified, both by the performance report

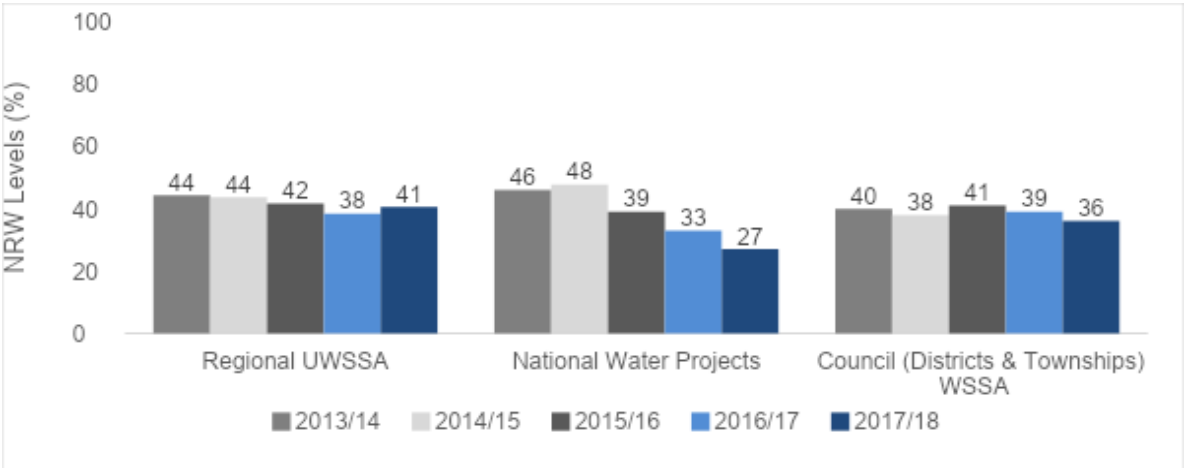
[40] Source: EWURA, 2018.

released by the EWURA and triangulated through the KIIs undertaken during this assessment, to include: 1) high non-revenue water (NRW) levels, 2) deteriorating operating ratio, and 3) low sewerage coverage.

High Non-Revenue Water

The overall level of NRW[41] in Tanzanian water utilities is high. While the EWURA establishes an acceptable maximum threshold of 20 percent average NRW as a sector benchmark, the NRW for the Regional UWSSAs during 2017-2018 averaged 41 percent, only a 3-percentage point improvement since 2013-2014. The indicator improved substantially from 46 percent to 27 percent for the National Project WSSAs during the period 2013 to 2018 as shown in Figure 15. For the district and township water supply and sanitation authorities (WSSAs), the EWURA FY 2017-2018 performance report highlights that the average NRW level was 36 percent. These high levels of NRW reflect the poor physical conditions of the water distribution networks (as most UWSSA managers interviewed highlighted) and low levels of customer metering particularly for council WSSAs which result in substantial commercial losses.

Figure 15: Trends of Average NRW Levels for Tanzanian Water Utilities in the Last Five Years



Most UWSSAs, both regional and national projects and district utilities, do not seem to have a clear separation of the proportion of physical vs. commercial losses to better understand the various components of their NRW performance. Discussions held with various stakeholders during the preparation of this assessment report revealed that, while there is a good overall understanding among utility managers of the importance of reducing both physical and commercial losses, reducing NRW requires cost-intensive major rehabilitation investment which can be technically complex to implement. This makes it a challenge for the utilities to achieve sector benchmark for reduction of NRW. Some utilities such as the Iringa UWSSA have managed to achieve a commendable level of success in addressing NRW and have reduced levels from 60 percent in 2011 to a current level of 24 percent.

Partnering with the private sector can be an important instrument to address water loss. A positive recent development in the sector is that the country's largest utility, Dar es Salaam Water and Sewerage Authority (DAWASA) has initiated a new strategy of partnering with the private

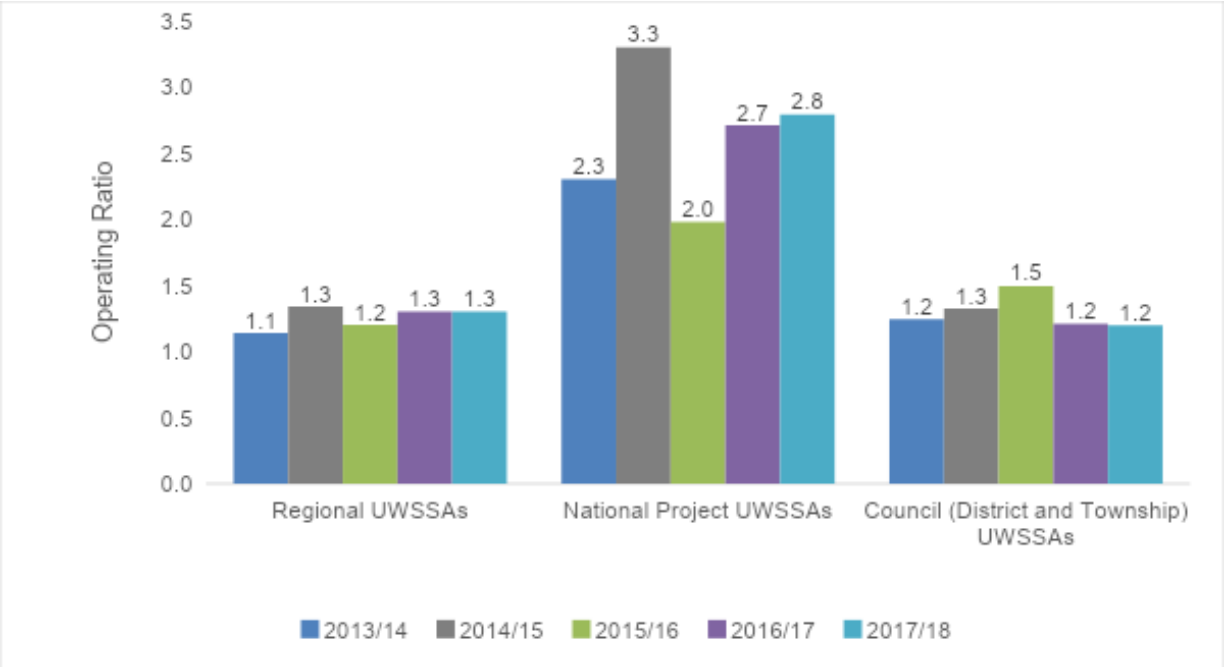
[41] NRW is equal to the total amount of water flowing into the water supply pipelines (network) from a water treatment plant minus the total amount of water that consumers are authorized to use. It is essentially water that has been produced and is "lost" before it reaches the customer. Losses can be physical losses (through leaks in the pipelines) or commercial losses (*e.g.*, through theft/illegal connections or metering inaccuracies).

sector to address water loss. With the support of the WB, DAWASA aims at introducing a performance-based contract with a private contractor for the reduction of NRW. This development is significant for the water sector in Tanzania since a performance-based service contract, if successful, would demonstrate to other UWSSAs and MoW officials how the private sector can be used as an efficient means to achieve significant improvements in operational and financial efficiency of water utilities. Interviews with private sector actors also demonstrate how technological support from the private sector, such as E-water Pay meters (see Section 3.4.4 and Box 12), can be of help in reducing water losses at the Public Water Kiosks. Water kiosks are increasingly being deployed to provide services in urban areas that are far away from water networks in growing cities and major towns.

Deteriorating Operating Ratio

The operating ratio, an important indicator of the financial sustainability of a water utility, measures the ratio of annual operating expenses to the utility's annual operating revenues. Operating revenue includes any money the utility receives for its services, including income from water and sewerage rates and connection fees. Operating expenses include items such as salaries for staff, supplies for day-to-day operations, repairs, and regular maintenance expenses. A water utility that has an operating ratio of less than 1.0 is considered financially viable, while an operating ratio greater than 1 indicates financial distress. Data from the regulator, the EWURA, shows that the average operating ratio for the Regional UWSSAs deteriorated from 1.2 to 1.35 between the period 2015 to 2018. The situation was much worse for the National Project UWSSAs, whose average operating ratio rose from 2.0 to 2.8. Figure 16 shows the operating ratios of the regional and national project UWSSAs in Tanzania for FY 2017-2018.

Figure 16: Operating Ratios for UWSSAs in Tanzania



The average operating ratio for district and township UWSSAs improved from 1.25 to 1.04 in the same period as billed water revenues increased cumulatively at 39 percent. Only 12 council UWSSAs have applied for tariff reviews since 2011, the remainder relied on automatic inflationary indexing of their tariffs. A majority of the council UWSSAs receive subsidies from the MoW particularly for some electricity bills and staff salaries. Further analysis is needed to determine the

incentives and disincentives these subsidies pose to cost recovery and the sustainability of these council UWSSAs, some of which are currently undergoing aggregation with regional UWSSAs. For the large Regional WSSAs, while the service coverage improved for the population (resulting in increasing sales volumes), the majority still sell water below cost. Improving service coverage in this case eventually leads to larger financial operating deficits. While GoT and DPs focus on expanding coverage, complementary operational actions must be taken by these UWSSAs to bolster their financial sustainability.

Low Sewerage Coverage

From the 2017-2018 performance report by EWURA, only 11 of the 26 Regional UWSSAs provide a sewerage network service, serving just 6.3 percent of all customers in their service areas. Regional UWSSAs with no sewerage connections at all include: Kahama, Shinyanga, Mtwara, Musoma, Singida, Lindi, Kigoma, Mpanda, Babati, Bukoba, Sumbawanga, Njombe, Bariadi, and Geita. DAWASA, the country's largest UWSSA, noted that their current sewer network covers only 10 percent of Dar es Salaam, a city of about 6 million residents. No council UWSSAs have a sewerage network. Only on-site sanitation systems are available. These include mostly household-level latrines, single dwelling septic tanks, and shared septic tanks in apartments and other gated communities. The fecal sludge from these on-site containments are de-sludged by either the utility exhauster trucks or private sector cesspit emptiers to treatment facilities or disposal areas set aside by the LGAs. Significant challenges still abound on the safe emptying, transportation, and treatment of sludge. Out of the 82 council UWSSAs, only two—Nansio and Sengerema—have fecal sludge treatment facilities. Another five—Misungwi, Magu, Pangani, Muheza, and Korogwe—have recently acquired land for the construction of wastewater treatment facilities. To fill this vacuum, entrepreneurial private sector actors are emerging to set up decentralized fecal sludge collection and treatment businesses for clients in off-grid residences. A detailed finding on the practices of these private actors is presented under section 3.6 of this report.

In addition to leveraging private sector actors to provide off-grid sanitation solutions, there are other options for addressing the sanitation gaps in urban areas that are being tested and have shown potential to be sustainable solutions in growing cities. For example, MWAUWASA has piloted a simplified sewerage system for hilly areas in its service jurisdiction and connected these to the main sewer which has shown great success. To guide innovations in the design and implementation of off-grid urban sanitation solutions, the MoW, in partnership with the Bremen Overseas Research and Development Association (BORDA), has developed a practice guideline for the Application of Small-Scale, Decentralized Wastewater Treatment Systems in Tanzania.

Several KIs interviewed during the assessment noted that the primary reason why sanitation coverage is so low in Tanzania is that the GoT has no formal sanitation strategy and has been investing very little in sanitation. (This is evident from the findings on the "water sector investment and financing" section of this report.) With the projected rural-urban migration pattern, addressing the urban sanitation in major cities, district headquarters, and smaller emerging townships is increasingly becoming a critical policy priority for the GoT. The MoW recognizes this as a key sector challenge. While it is still at a nascent stage, the Ministry of Water has formed a new Sewerage and Sanitation unit under the Directorate of Water Supply to provide leadership in addressing this situation. The unit was established to oversee WASH policy in the area of sanitation, provide guidelines to the RUWASA to perform their sanitation-related responsibilities, and supervise national projects on wastewater management as well as spearhead collaboration with external stakeholders and other GoT agencies sharing a mandate on sanitation.

3.2.4 Water Sector Planning, Monitoring, Evaluation, and Learning

M&E systems exist but are still in an early stage of development. The GoT created the Central Data Management System for water (CDMSW)—to facilitate water supply services monitoring, evaluation, and data management at the MoW—and the National Sanitation Information Management System (NSMIS) for sanitation and hygiene-promotion services data management at the Ministry of Health. Nevertheless, the majority of the respondents interviewed during the assessment see the existing government monitoring systems as insufficient for influencing management and decision-making. The lack of transparent monitoring data and weak capacity of GoT staff—both at the national level and the LGA level—have also hampered DPs and NGOs from making relevant and sustainable contributions to the sector. Data that have been gathered in recent years are often output-focused, with limited information linking inputs to outputs to enable value for money analysis, and the lack of outcome data has hampered strategic use for planning and decision-making. As one respondent from MoEST reported: "….*data which is recorded under NSMIS is only related to health sector, Basic Education Management Information System (BEMIS) has no Indicators for Sanitation, which makes difficult for the WASH program to record and report performance based on the SDGs indicators. The program is struggling with harmonizing the data to be able to effectively report the performance."*

Weak Hydrological data monitoring: The BWBs report a severe gap in hydrological data management systems and capacity for data production, management, and processing for policy use. Most rivers lack sufficient gauging stations critical for monitoring changes in water resources.

The Payment by Results investment approach incentivizes effective M&E. Despite the shortcomings in the WASH sector and WRM monitoring systems, some efforts have been made to improve monitoring and data management. The United Kingdom (UK) Department for International Development (DFID) and WB-funded Payment by Results WASH investment approach has introduced discipline and focus on monitoring and verification of results. The GoT is now investing more in improving the existing M&E systems—the CDMSW and NSMIS—which requires significant support in systems strengthening.

3.2.5 Water Sector Investment and Financing

Low investment made towards strengthening the enabling environment and sustainability: While Tanzania has a national water and sanitation strategy—WSDP II—and a well-defined legal framework, ineffective implementation, which departs from what is planned under WSDP II, has prevented realization of sector investment targets. This is evidenced in the finding of the WSDP Phase 1 evaluations and mid-term evaluation of WSDP Phase 2. As indicated earlier, the WSDP I allocated very few resources for water scheme maintenance, repair, and replacement. Moreover, although communities are expected to cover operations and maintenance expenditures from service users, collected revenues are often insufficient thus positioning communities to expect support from unavailable GoT allocations. This lack of financial sustainability is a major contributor to the high non-functionality rate of rural water points.

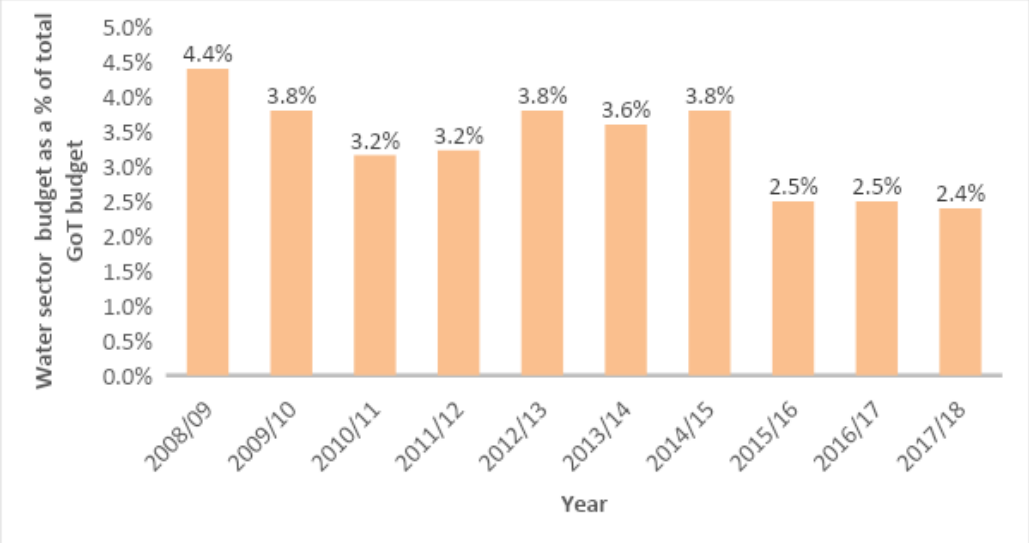
Water sector financing relies considerably on external partners—specifically bilateral and multilateral donor support. The most recent WASH budget analysis by UNICEF indicates that water sector spending amounted to an estimated 2.4 percent of total government spending. It also indicates that the total GoT spending on water and sanitation services is about 0.3 percent of the GDP, which is still less than the commitment the GoT made as a signatory to the 2008 eThekwini declaration[42] to spend at least 0.5 percent of GDP on Water and Sanitation.

The trend shown in Figure 17 reveals that the WASH budget allocation as a share of the GoT's

[42] 2nd African Sanitation and Hygiene conference, Durban South Africa, 2008

total budget is on a decline over the last 10 years, leveling out at about 2.5 percent of the total budget after 2015. With the rapid population growth, substantial investment in WASH services is required for rehabilitation of existing infrastructure and expanding water supply and sanitation services to the unserved areas as well as for operations and maintenance of existing services. The GoT estimates that it will require about US $1.2 billion annually as per the SDG WASH costing tool estimates to realize the sector target of achieving universal access to water in the year 2030.

Figure 17: Trends of the Water Sector Budget Allocation as a Share of the Total GoT Budget



Source: UNICEF, 2018

Table 4 shows a summary of the water sector budget allocations for FY 2017-2018 with funding sources.

Table 4: Summary of GoT's Approved Budget for the Water Sector for the FY 2017-2018

WSDP Component	Approved Budget for Financial Year 2017-2018			
	GoT Budgets (US $)	Donors Support (US $)	Total Budget (US $)	% share
WRM	$11,086,957	$14,611,896	$25,698,852	9%
Rural Water Services	$95,652,174	$18,873,913	$114,526,087	42%
Urban Water Services	$62,173,913	$56,521,739	$118,695,652	44%
Sanitation and Hygiene	$0[43]	$3,036,957	$3,036,957	1%
Administration/Program Support	$7,877,236	$3,465,976	$11,343,212	4%
Total	**$176,790,279.59**	**$96,510,480.43**	**$273,300,760.02**	**100%**

Source: UNICEF, 2018.

The summary presented in Table 4 reveals four salient features of water sector financing in Tanzania.

1. There is a significant GoT underfunding for WRM and sanitation. The GoT allocates 86 percent of its budget for rural and urban water supply services with only 9 percent allocated

[43] GOT budget for sanitation is not trackable due to the fact that it is lumped into the same budget code as supply.

for WRM. Nothing is reported for sanitation.

2. The Tanzania water sector depends substantially on external donor funding with donors contributing as much as 35 percent of the total sector budget.
3. Urban water services provision consumes the bulk of the allocated sector resources, using about 44 percent of the total budget. A large portion of this is from DPs
4. The budget allocation for Sanitation and Hygiene is executed through the National Sanitation Campaign that is allocated to the Ministry of Health and Ministry of Education (for schools WASH).

The sanitation budget allocation by the GoT is not easy to track. One of the challenges in attempts to track WASH sector investment patterns in Tanzania is that the public sector budget for water does not distinguish between investments in water supply and investments in sanitation, which makes tracking of sanitation budgeting and expenditure difficult. This makes it hard to estimate public investments made and investment requirements that are still unmet towards sanitation. Tanzania's public finance management system uses an Integrated Financial Management Information System (IFMIS) which gives codes to various expenditure votes. For the WASH sector, no particular code exists for sanitation since both water and sanitation are lumped as one code in the Mid Term Expenditure Framework which makes it difficult to know how much money is allocated for sanitation.

Delayed disbursement of funds threatens sector results. A UNICEF analysis revealed that one month before the end of FY 2016-2017, the GoT had only released 32 percent of approved funds. The mid-term review of WSDP completed in September 2018 references a Controller and Auditor General (CAG) memo from May 2018 which noted that total WSDP program releases for the 2016-2017 period amounted to only 41 percent of the approved budget. Interviews with MoW and RUWASA officials confirmed concerns around delayed disbursement of funds.

Moving towards results-based financing: The establishment of a NWF whose mandate is to mobilize resources and provide investment support for water services and management of water catchment areas is another recent change in the water sector that points to a move in the right direction. The principle source of funding for the NWF is currently from the fuel levy. (The GoT recovers 50 Tanzanian shillings [Tsh] per liter of petroleum and diesel from every purchase for water).

The fund shall be managed by a Board (not yet constituted) whose members shall be appointed by the Minister for Water. The monies appropriated from the fund are intended to be used for execution of clearly identified water and sanitation projects including through issuing loans on favorable terms to the implementing agencies where necessary. The specific guidelines for use of funds from the NWF are yet to be formally developed and operationalized. The MoW has approached DPs to support it in developing clear guidelines for management of the NWF.

Moreover, MoW officials interviewed during the assessment indicated that the monies from the fund shall only be disbursed on a performance basis to ensure effective and efficient utilization.

> *"The expectation is that water utilities, basin boards and other water sector institutions will have to submit clear project proposals to the fund for financing with a clear monitoring and performance evaluation basis."* (KII, GIZ)

The intentions to use the monies from the NWF on a performance basis follows a growing trend of results-based financing for WASH services in Tanzania. DFID as well as the WB are currently using Results-Based Financing Instruments for WASH services. Boxes 6 and 7 briefly summarize the DFID Payment for Results approach and the WB's Program for Results as case examples.

Box 6: DFID – Support to Rural Water Supply, Sanitation, and Hygiene in Tanzania (£150 Million for the Period 2014 to 2022)

For the DFID project, £70 million of the funds are allocated under a Payment by Results (PbR) approach which provides conditional financial performance incentives to LGAs to improve sustainability by focusing on maintenance of water infrastructure. Recognizing the critical importance of ensuring constructed water schemes are maintained and continue to provide services in the long term, the PbR approach under this project uses one choice of indicator—functioning water points. The PbR incentive is to provide each district with £3,000 for every additional functioning water point and £50 for all existing functioning water points. The formerly DWEs under the LGAs, now DWMs under the RUWASA, send monthly reports to the MoW for further verification by DFID before payments are disbursed. One of the challenges that has been observed in the last three years of the project is over reporting of results by DWEs to get more than true funding. To address this challenge, the reports received from the DWEs are back-checked with a random sample of CBWSOs, formerly COWSOs and village heads, either via mobile phones or through physical field visits. The rationale is that the CBWSOs have an incentive to report accurately since this can speed up repairs of problematic schemes. Inaccurate reports provided by DWMs are replaced with accurate information obtained from the villages.

Box 7: World Bank – Sustainable Rural Water Supply and Sanitation Program Payment for Results Investment Approach (US $350 Million for the Period 2018 to 2024)

The objective of the Program is to increase access to rural water supply and sanitation services in 17 regions (see Figure 17 for the target regions) and strengthen the capacity of select sector institutions to sustain service delivery. To sustain the results, the project is implemented through a PbR approach where payments are triggered by a set of disbursement-linked indicators (DLIs) that measure and reward the districts for achieving annually verified results. The verification of the results reported is done through a review of reports, records, and meeting minutes submitted by the districts as well as field visits to project sites. Table 5 describes the performance incentives for each of the DLIs under the project.

Table 5: DLIs for the WB-Supported PbR Program in Tanzania

DLIs	Performance Incentives
Results Area 1: Sustainable access to improved water services in rural areas	
DLI 1. Number of people with access to an improved water supply DLI 2: Number of sustainably functioning water points	• Each district will be paid US $25 per person who gains access to an improved water point. The amount will be paid when the district builds a new, expands an existing or rehabilitates a non-functioning water scheme. • Each district will be paid US $164 per year for each existing water point that is kept functioning
Results Area 2: Increased access to improved sanitation services in rural areas	
DLI 3. Number of people with access to an improved sanitation facility DLI 4. Number of public primary schools with access to improved sanitation and hygiene facilities DLI 5. Number of villages that achieve and sustain community-wide sanitation status	• For every new person with access to improved sanitation, the district gets US $5. • For each school provided with improved WASH facilities, the district gets US $20,000 (one drop hole per 40 girls, one drop hole per 50 boys, and one drop hole suitable for disabled pupils). • If one new village achieves open defecation free (ODF) status, the district gets US $16,000 and if one new village maintains the ODF status in a year, the district gets US $2,500.
Results Area 3: Strengthen the capacity of sector institutions to sustain service delivery in rural areas	
DLI 6. Number of villages with a COWSO with improved operations and management (O&M) capacity for water supply services DLI 7. Number of participating districts submitting accurate and complete sector M&E data DLI 8. RUWASA established and operationalized	• Each district gets US $15,000 for every village where a CBWSO complies with certain basic conditions for improved O&M capacity for water supply (there are five conditions defined in detail) plus an additional extra US $15,000 if the CBWSO complies with an additional three higher-level capacity conditions. • Each district receives US $23,000 per year for submission of timely, accurate, and complete sector M&E data to the Central Data Management Team (CDMT) at the MoW.

Figure 18: Targeted Regions for the WB PbR WASH Project in Tanzania

Source: WB, 2018.

3.2.6 Water Sector Human Resource Capacities

Interviews with KIs in Water utilities, RUWASA, Water Institute, EWURA, and at the MoW highlight gaps and opportunities in areas where improvements are needed in the sector's human resources capacity. These include the following:

1. **Sanitary engineering skills are still lacking in the sector**. There is a lack of experts specialized in sanitation engineering, particularly as demand for wastewater collection and treatment keeps rising for urban areas. Human resources capacities and competencies are currently inadequate to meet the demand and improve performance. There is a need for specialized programs in sanitation. Partners could support partnerships between the UWSSAs, MoW, and university-based research institutions aimed at building capacity of GoT staff on sanitary engineering.
2. **Vocational Training for operational excellence of service providers is needed**. The vocational skills development and training for lower-level maintenance persons and technicians is an area of need that could enable greater youth involvement in the sector. Already, DPs such as GIZ is partnering with GoT agencies such as the Water Institute in Dar es Salaam to design and deliver water specific skills such as plumbing, hydrology, *etc*. to youth. GIZ has also supported placement of skilled youth as interns with UWSSAs to provide them with practical skills.

3. **Commercial and Business development skills are still low among UWSSAs' staff**. Despite the fact that UWSSAs are expected to operate as commercial utilities with clear business procedures and strategies, most of the utilities still employ engineers with little commercial knowledge or training. Skills such as development of investment proposals and business plans are key areas of need among utilities.
4. **There are skills gaps in WRM human resources**. Data management is a key skills gaps identified through interviews in water basin offices. Most basin office staff lack skills in the application of modern remote sensing data and building up of a network of real-time hydrological information management systems, including flood forecasting, climate change modeling, and predictive analysis. Given the pressures and threats expected from the increasingly unpredictable and more frequent climate change effects, this will be a critical skill set for the GoT staff.

3.3 ASSESSMENT QUESTION 3: WHAT STRATEGIES ARE BEING EMPLOYED IN ONGOING AND PLANNED EFFORTS IN WASH AND WATER RESOURCES MANAGEMENT BY USAID, OTHER DONORS, AND NGOS AND WHERE HAVE THEY TAKEN PLACE? HOW ARE WOMEN AND YOUTH BEING ENGAGED IN THESE INTERVENTIONS? WHAT ARE THEIR ACHIEVEMENTS OR ATTRIBUTES AND WHAT ARE THE BOTTLENECKS/CHALLENGES AND LESSONS LEARNED?

3.3.1 The GoT's Sector-Wide Approach as a Coordination Mechanism for Different Water Sector Actors

Through the sector-wide approach (SWAp) adopted at the start of the WSDP, the support of non-state actors—including local CSOs, international non-governmental organizations (INGOs), and DPs—both bilateral and multilateral organizations have played an important role in the development of Tanzania's water sector. This role has included contributions to strategic planning and institutional reforms in urban and rural water supply, sanitation, and WRM. Through the WSDP program's SWAp, a joint Basket Fund was established as a mechanism for coordinating DP activities.

The Tanzania Water Sector Development Partners Group (DPG) was established in 2005 to enhance the harmonization of bilateral and multilateral agencies and donors and to support the implementation of the SWAp through the Basket Fund. The DPG derives its mandate from the Partnership Principles signed between the GoT and DP to structure development assistance to support the implementation of TD 2025 across different sectors. Membership of the Water DPG is open to all DPs supporting the sector, including some NGOs such as SNV and Water Aid.

During interviews with different DPs, two key issues regarding the DPs' partnership with the GoT emerged. First, the majority of the DPs have pulled away from making direct contributions to the WSDP Basket Fund by opting to implement earmarked projects outside the Basket Fund. Second, the role played by the dialogue mechanisms and active participation of DPs under the DPG framework seem to be reducing, as a possible effect of DPs withdrawing direct contributions to the Basket Fund, among other reasons. A WB evaluation of their own contribution towards the Basket Fund under WSDP I indicated that some of the concerns observed that may have informed the DPs' decisions to withdraw from the Basket Fund include the slow pace of implementation of projects as a result of bottlenecks in public procurement, contract management, and lapses in management of fiduciary risks.[44] A mid-term review of WSDP II commissioned by the MoW with support from UNICEF also highlighted similar observations. The WSDP II mid-term review

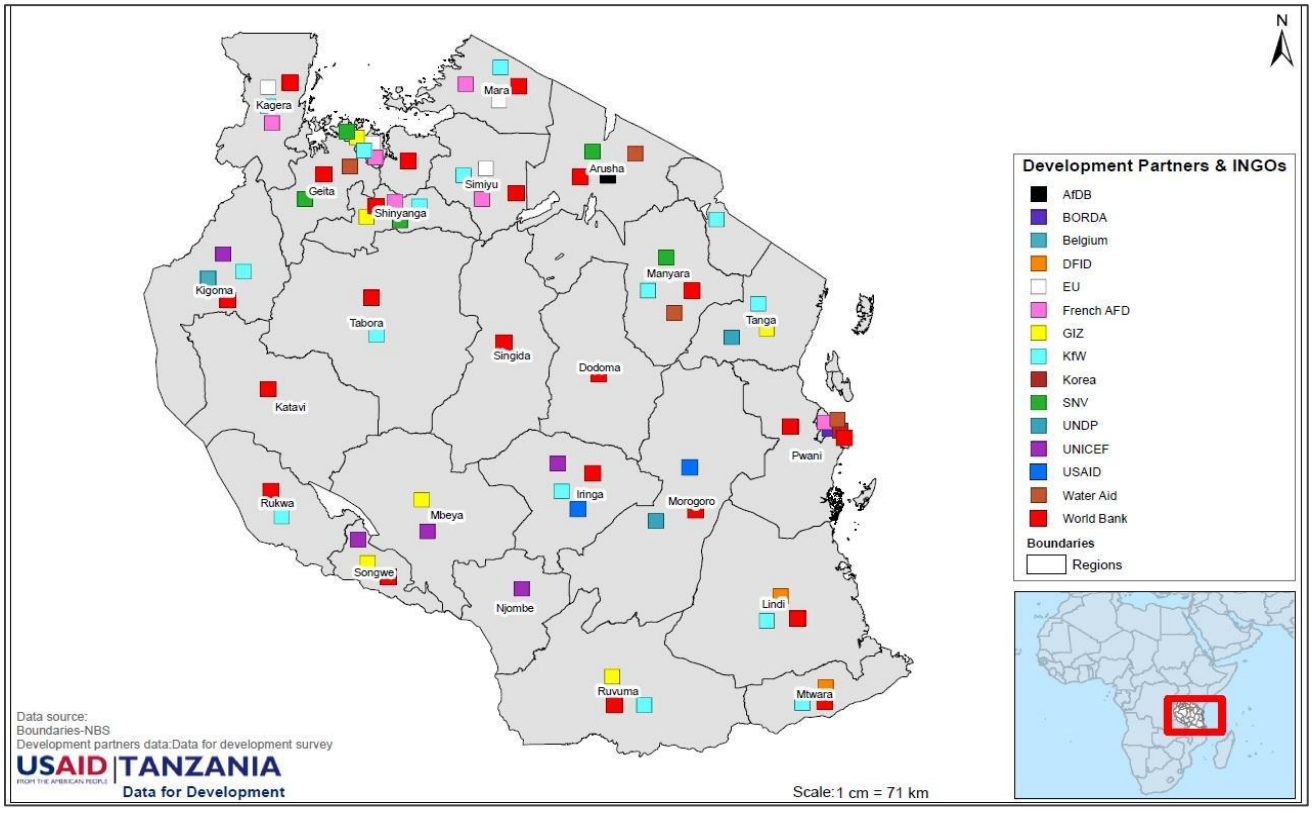
[44] WB, 2018, Tanzania - Sustainable Rural Water Supply and Sanitation Program Project: Tanzania – Sustainable Rural Water Supply and Sanitation Program – Program-for-Results – Program Appraisal Document. Washington, D.C.: World Bank Group.

highlighted three reasons for the decline of the dialogue mechanism under the DPG umbrella:[45]

1. The relocation of GoT offices, including the MoW to Dodoma (following a presidential directive), while DPs remain in Dar es Salaam has made meetings more irregular since it takes a lot more effort in coordination and travel plans to have a meeting.
2. The MoW has failed to finance the sector dialogues under the DPG from their own resources following reduction of DPs' contributions to the Basket Fund—which hitherto would fund most of these meetings.
3. Direct contribution to the Basket Fund was a key motivation for regular DPG meetings since the DPs used these to review progress and monitor how their contributions are being executed. With the withdrawal from the joint fund, most DPs are less motivated to have those regular joint meetings.

DPs' interventions across the regions: Although many DPs have withdrawn from the water sector Basket Fund, they still support the water sector significantly through individual projects. Figure 19 shows the spatial distribution of DPs and INGOs supported water sector projects in Tanzania in 2019 based on survey and review of DPs and INGOs program documents the assessment team had access to. A detailed description and funding levels of the various DP projects can be found in Annex 6.

Figure 19: Map of DPs' Water Sector Interventions in Tanzania



3.3.2 Activity Focus Areas of Bilateral and Multilateral DPs

From the KIIs and the secondary review of various key DPs' current and planned water sector interventions in Tanzania detailed in Annex 6, it is evident that the larger allocation of DPs' support

[45] UNICEF Tanzania. September 2018. Mid-Term Review of the Water Sector Development Programme Phase II (WSDP II) and Review of the Water Dialogue Framework.

in the water sector goes towards urban supply for both regional UWSSAs and council UWSSAs. The main DPs supporting Urban WASH are the German Development Bank (KfW), French Development Agency (AFD), European Union (EU), GIZ, Korea International Cooperation Agency (KOICA), WB, and African Development Bank (AfDB). The DPs supporting rural WASH interventions include USAID, UNICEF, Belgium, WB, and DFID. Other key international NGOs active in Tanzania who largely support rural WASH include Water Aid, BORDA, SNV, and World Vision.

The portfolio of ongoing DP support to the water sector, including multi-year projects is at least on the order of US $2.08 billion as shown in the detailed summary of DP projects is provided in Annex 6.[46] The bulk of these investments are in infrastructure development for water supply while sanitation has been funded to only a limited extent by the DPs. Only a few DPs—GIZ, USAID, and UNDP—have ongoing interventions supporting WRM. The UNDP is supporting community-level WRM in the Wami-Ruvu Basin by providing meteorological information on rainfall to farming communities to help them plan their agricultural activities and undertake activities aimed at reducing land degradation through improved farming methods and protection of riparian lands.

3.3.3 Lessons Learned, Challenges, and Opportunities for Interventions Highlighted by the DPs

Gaps in integrated nutrition and WASH programs: The only DP supporting an integrated nutrition and WASH approach, including institutional WASH through school and health facilities, is UNICEF. The national panel survey 2014-2015 indicated that unimproved water and sanitation are associated with higher rates of stunting and child mortality among children.[47] This is particularly so for infants and children under 2 years of age. According to MOH officials, waterborne diseases contributed to 60-80 percent of all diseases, diseases like schistosomiasis, parasitic infection (askaris), diarrhea, cholera, sight-related diseases and skin diseases which were consuming a larger percent of the government budget.

Greater focus on capacity building and systems strengthening: Several DPs are supporting capacity building and systems strengthening initiatives. These include: GIZ working with the Water Institute at Ubungo to train and facilitate internship opportunities for diploma-level water sector technicians, hydrologists, and plumbers; DFID and the WB working through the PbR approach to build the capacity of LGAs; and now the RUWASA to organize and manage rural water schemes. Some of the DPs' interventions are towards the tail end of their funding cycle and some have given indications that they will be scaling down or pulling out of the water sector which could present a gap in systems strengthening.

The DPs interviewed highlighted a number of lessons learned, challenges, and opportunities for interventions including:

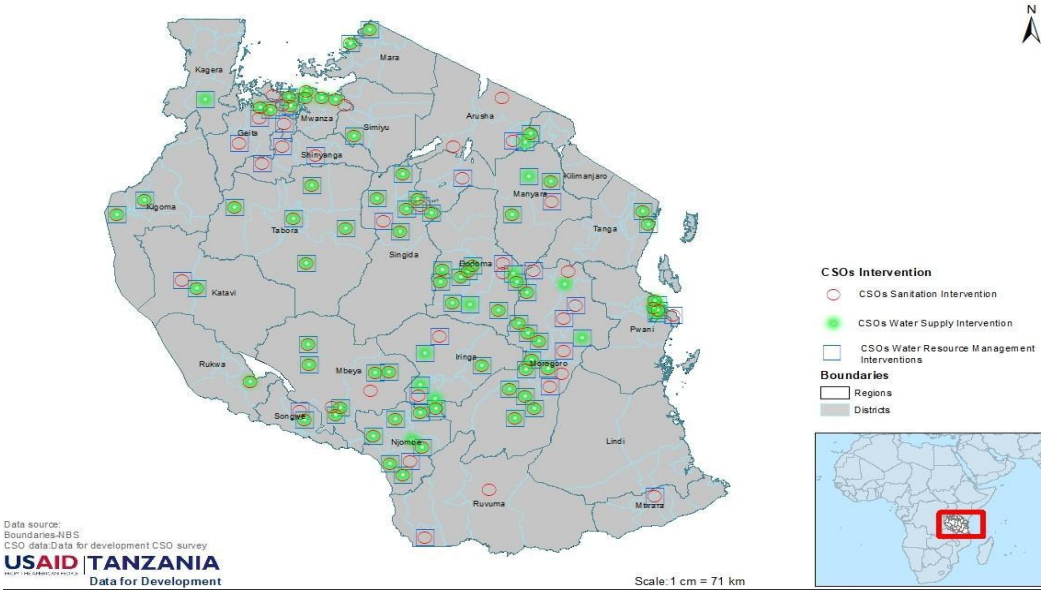
1. While the DPs reckon that the private sector can contribute to the water sector growth through financing and capacity building, weak governance and sector accountability have stymied their contribution.
2. Concerns around water authorities drawing water from the basins without making sufficient investments in protection and conservation of water sources present risks to future resource endowment.

[46] This is based on publicly available project documents as well as documents provided by DPs interviewed. The reader should note that the list of interventions shown in Annex 6 is not exhaustive of all water sector support interventions by DPs. At the time of the assessment, it was not possible to access detailed project volumes from all DPs in the country.

[47] NBS Tanzania, 2016, Tanzania National Panel Survey Report (NPS) – Wave 4, 2012-2013. Dar es Salaam, Tanzania.

3. While there has been a low focus on sustaining services delivery beyond new infrastructure development, the formation of the RUWASA provides an opportunity to consolidate sector gains but also calls for more targeted technical assistance in implementing the provisions of the new water act focused on sustainability. This includes supporting collaborative interventions between different agencies such as the RUWASA and the BWBs on water allocation and conservation plans and the RUWASA, MoHCDGEC, and MoEST on sanitation and school WASH.
4. Most UWSSAs meet less than 50 percent of their coverage areas leaving the majority of urban dwellers with no utility services. Supporting urban utilities to overcome the NRW problem presents a significant opportunity to expand services to unserved areas without networks.
5. While the DPs appreciate that the PbR model provides an opportunity to accelerate realization of the SDG 6 for Tanzania, they also recognize weaknesses in data management and the rigor of validating results needed to trigger payments.
6. KfW, which has been supporting a program aimed at facilitating UWSSAs' access to commercial finance, reports an increased confidence in the water sector from commercial banks in the recent past. KfW has observed that the quality of bank proposals is improving and is showing more clear expectations of profitability. As a result, banks are becoming increasingly interested in lending to water utilities. However, bureaucratic blockages owing from conditions imposed by the Ministry of Finance before admitting commercial loans has decreased the appetite of banks to continue lending to UWSSAs.
7. Local civil society involvement in the water sector: Apart from the international DPs, a large number of local CSOs are active in the water sector in Tanzania. These local actors are organized under an umbrella body called the Tanzania Water and Sanitation Network (TAWASANET). The assessment team conducted a brief survey of the 63 CSOs who are members of TAWASNET to determine the location of their activities, the kind of activities they are involved in, and the most pressing challenges they see as constraining water sector growth. Figure 20 shows the spatial.

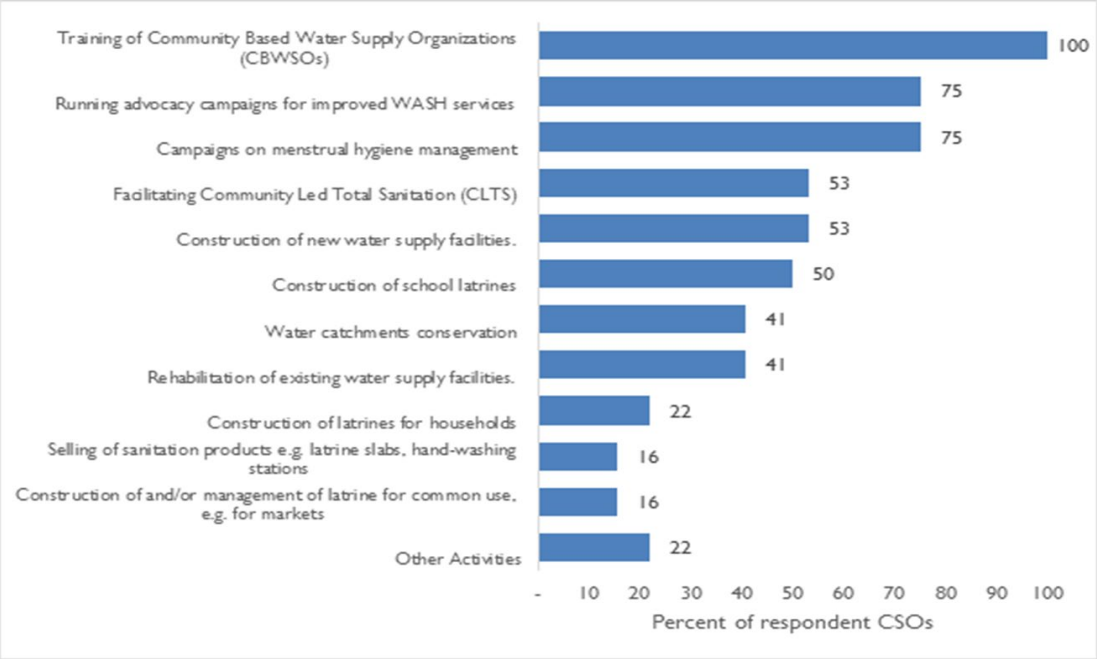
Figure 20: Spatial Distribution of Local CSOs Active in Tanzania Water Sector Across Regions



The survey results indicate diversity in activities undertaken by the different CSOs, with most of

them involved in training, governance and advocacy interventions. As Figure 21 shows, the majority of the CSOs mainly focus on training of CBWSOs, advocacy campaigns for improved WASH services, construction of new water supply facilities, campaigns on menstrual hygiene management, and facilitating CLTS. Other activities such as raising awareness on water-related policies and laws, maintenance service for water points, research, M&E, and scoping studies are also carried out by a few organizations.

Figure 21: Types of Activities Undertaken by WASH Sector CSOs in Tanzania



The CSOs see financing as the main constraint hindering achievement of WRM and WASH targets in Tanzania. When asked the question “Based on your experience, what are the most critical challenges constraining achievement of universal access to water and sanitation for the people of Tanzania?”, the majority of CSOs indicated low financing for WASH as the key constraint as can be seen in Figure 22 below. Other sector constraints highlighted include low awareness of public health risks in communities; weaknesses in multi-stakeholder coordination and cooperation; accountability, integrity, and capacity gaps among government agencies and other stakeholders; poor management of schemes by CBWSOs (formerly COWSOs); and gaps in government agencies’ mechanisms for monitoring and tracking progress and addressing gaps based on emerging lessons.

Figure 22: Top Constraints Constraining Achievement of WASH Goals Identified by CSOs in Tanzania

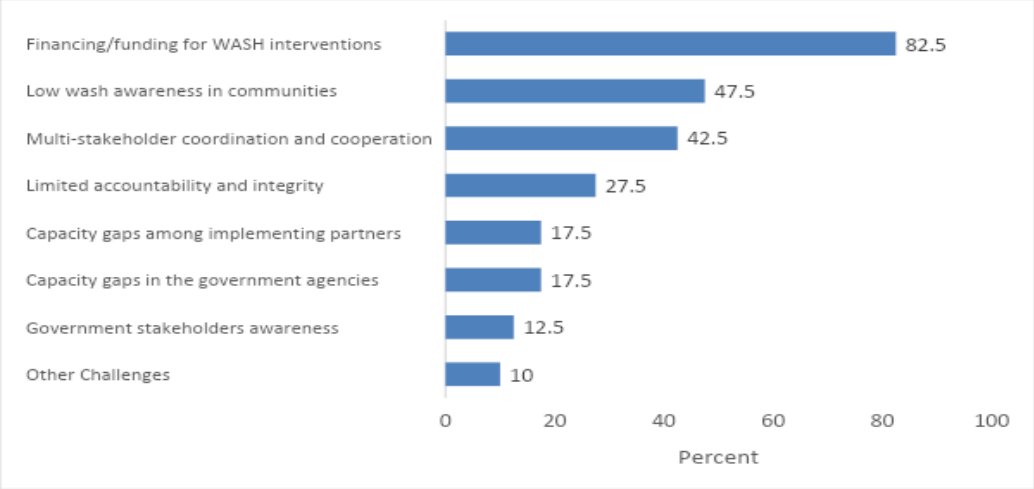
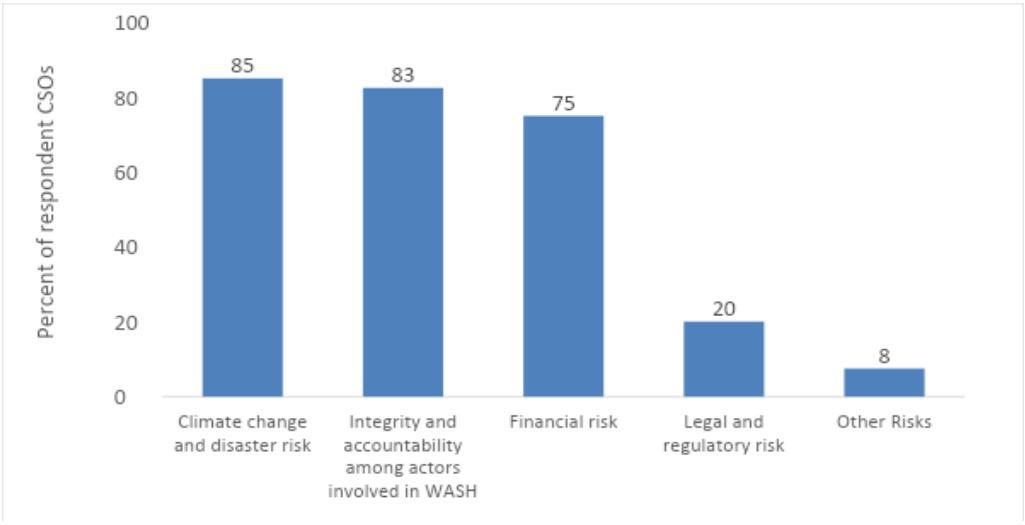


Figure 23 shows that CSOs rank climate change as being the top risk impinging on the achievement of water and sanitation targets in Tanzania. Other key risks include concerns of integrity and accountability among actors involved in WASH and of financing.

Figure 23: Major Risks Facing the Water Sector in Tanzania as Ranked by CSOs



3.3.4 Women and Youth Engagement in Tanzania's Water Sector

Women are most affected by lack of proximate access to improved WASH services. Women and girls in Tanzania are responsible for collecting water in 85 percent of households.[48] The result of this is that they are exposed to significant health and safety risks when walking long distances to access water.[49] Tanzania Gender Networking Programme (TGNP) in Mtandao reports several cases of incidents to mothers or children resulting from gathering water.

TGNP reports that significant improvements have been made by the GoT towards reducing the heavy burden on women to access water and sanitation services. One of these is the President's

[48] WB, 2017, Tanzania WASH Poverty Diagnostics.
[49] TNGP.

commitment to *"kumtua mwanamke ndoo kichwani"* (to take the water bucket down from a woman's head, in Swahili) building on the campaign started by TGNP to advocate for improved proximate water access for households to relieve women of the heavy burden of fetching water. This led to a GoT policy directive that every domestic water point built by the MoW should be at most 400 meters away from dwellings.

Women are often sidelined in decision-making. While policy actions such as the "*kumtua mwanamke ndoo kichwani*" demonstrate government commitment to gender-responsive actions in the sector, women's leadership in water sector policymaking and water management remains noticeably low. This includes MoW policymaking and management of water authorities, as well as operation of the water supply at the community level through COWSOs. While the law stipulates particular thresholds for women's inclusion in decision-making (national affirmative action of 30 percent women's representation in all committees), this is seldom applied in management leadership recruitment in the public water sector. At the MoW and in water authorities, men largely occupy the top decision-making leadership roles. It was noticeable during the assessment team's interviews with upper leadership that GoT water sector officials were predominantly male. The low presence of women in management and leadership positions is a concern raised by TGNP who are currently doing an analysis of women's role in policymaking, including in the water sector. In developing the WASH infrastructure, women complained of not being invited to the planning sessions yet they were expected to be part of the construction, where the community members are required to make financial or material contributions. Some of the concerns raised by a female member of COWSO leadership during the assessment was that, even when they are invited, women are not given sufficient time to make contributions and that their opinions are seldom taken into consideration in making decisions.

Most of the insights obtained from this assessment related to women's engagement in water were from TGNP whose core mandate is championing women's rights. This points to a generally observed trend where little attention is given to women's engagement in WRM and WASH services. The majority of the respondents interviewed from the utilities and government agencies such as the RUWASA, EWURA, and MoW did not present convincing cases of deliberate engagement of women in managing resources and providing services apart from stating the statuary requirements as defined above in addition to describing ideal situations of women engagement which are not practiced in Tanzania

Opportunities for youth in the water sector: The important contribution that the youth of Tanzania make towards water sector development was acknowledged by all the key GoT and DP respondents interviewed during the assessment. The assessment sought to establish the extent of youth involvement in current ongoing WASH programs as well as explore what opportunities are available to best deepen youth's contribution to the water sector's development.

The potential of youth has been only marginally realized. Neither the MoW nor the Ministry of Labor, Employment & Youth Development have a particular strategy for youth engagement in the WASH sector. While there are a few examples of attempts to involve youth in the WASH sector, the full and deliberate engagement of youth to accelerate sector results is often overlooked in water sector activities. A few observations made on the extent of youth engagement in WASH services included The Water Institute at Ubongo which provides short technical training courses in water and sanitation services to the youth. There is an ongoing partnership at the Institute with GIZ and a few UWSSAs where trained youth from the Institute are placed in internships to acquire on the job skills within participating UWSSAs. This engagement promises to:

1. Build skills of youth to enable them to take on roles in the management of water supply.
2. Engage youth directly by UWSSAs to undertake minor pipeline repairs and maintenance jobs as well as making new connections on short term casual contracts (observed in

Mwanza).

3. Some sector actors, *e.g.*, the USAID WARIDI project, have taken a proactive approach to integrating youth in their projects. WARIDI facilitated training to more than 200 LGA staff in 20 districts and empowered community facilitators on gender and youth inclusion issues.[50] Box 8 summarizes WARIDI's youth engagement strategy in the current project.

Box 8: Engagement of Youth in the USAID-Funded WARIDI Project

Recognizing the critical importance of gender and youth integration in successful and sustainable attainment of multiple use of water services, integrated water resources management, governance and planning, and climate change adaptation, WARIDI has also developed a Gender Integration and Youth Inclusion (GIYI) guide to ensure gender and youth activities are mainstreamed in the key project activities. Across the project at large, women and youth were involved across activities and including requiring that CBWSOs supported under the project should have at least 50 percent youth representation. WARIDI has also made deliberate efforts to involve the youth in undertaking manual tasks such as trench digging and installation of water pipes and other related water works.

Source: WARIDI project documents.

Youth as entrepreneurial service providers: The Water Supply and Sanitation Act 2019 provides that, apart from CBWSOs, the RUWASA can delegate O&M of a rural water scheme to a youth group or a private enterprise. There is significant availability of opportunity to engage youth not only by supporting them to establish an organization or a private company that can be delegated by the RUWASA as a water services provider akin to a CBWSO, but also as a provider of sanitation services. This can be effected through offering a youth-led organization a service contract for the O&M of water supply infrastructure or building capacity of youth to build a successful fecal sludge collection, transportation, and treatment company similar to Usafi wa Mazingira na Watu (UMAWA), a private operator of a fecal sludge treatment facility (see Box 11 under assessment question 4).

Strengthening youth capacity to develop innovative tech solutions. There has been a significant evolution and opportunities for development of technology-based solutions towards WASH challenges exist. The youth are recognized as agile and tech-savvy as well as the future for adoption of innovative solutions in the sector. Some of the respondents during the assessment indicated that specialized training and capacity building sessions targeting youth should be facilitated to help them understand the challenges in water and sanitation and the opportunities that exist for technology-based solutions; sessions like facilitating technology "hackathons" where youth compete in developing solutions for particular WASH challenges—e.g., a real-time system for monitoring changes in river flow levels—remain unexplored opportunities.

4.4 ASSESSMENT QUESTION 4: WHAT IS THE INVOLVEMENT OF THE PRIVATE SECTOR IN WATER SUPPLY, RESOURCE MANAGEMENT, AND WASH ACTIVITIES IN URBAN AND RURAL ENVIRONMENTS? WHAT ARE THE OPPORTUNITIES AND CHALLENGES FOR ENTERPRISE IN THE SECTOR? WHAT ARE THE INCENTIVES FOR PARTNERSHIP WITH PUBLIC SECTOR SUPPLY? WHAT POLICIES, REGULATIONS AND STRATEGIES ARE IN PLACE TO SUPPORT/ENABLE OR HINDER THE PRIVATE SECTOR FROM PARTICIPATING/WORKING IN THE WATER SECTOR?

This section presents assessment findings on the opportunities available to enhance the performance of the sector through private sector participation.

[50] ME&A (for USAID), August 2018, Mid-Term Evaluation of the Water Resources Integration Development Initiative (WARIDI), Tanzania. https://dec.usaid.gov/dec/content/Detail_Presto.aspx?ctID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&rID=NTE0NjE4&sID=MQ%253d%253d&qrs=VHJ1ZQ%253d%253d&q=KERvY3VtZW50cy5CaWJ0eXBlX05hbWU6KCgiU3BlY2lhbCBFdmFsdWF0aW9uIikgT1IgKCJGaW5hbCBFdmFsdWF0aW9uIFJlcG9ydCIpKSk%253d&swi=d2F0ZXI%253d&rrtc=VHJ1ZQ%253d%253d.

3.4.1 Enabling Environment for Private Sector Participation in the Water Sector

Public-private partnerships (PPPs) involve mutual sharing of risks and rewards. The PPP reference guide defines a PPP as a cooperative venture between a public sector and a private sector agency built on the expertise of each partner to best meet clearly defined public needs through the appropriate allocation of resources, risks, and rewards.[51] PPPs can take a variety of forms, with varying degrees of public and private sector involvement and varying levels of public and private sector risk allocation. Some of the benefits PPP presents include: bridging the gap between increasing needs of infrastructure and available constrained public financial means; enhancing competition and reducing cost; and improving the management capability and professionalism of the public sector.

The GoT has created enabling legislations, policies, and actions plans for private sector participation (PSP) in the water sector: The GoT, through various legislations, policies, and strategies recognizes the critical importance of the private sector's contributions towards reaching socio-economic development targets. Table 6 summaries the four most relevant to PSP in the water sector.

Table 6: Key GoT Legislations and Policies Enabling PSP in the Water Sector

Key Legislation, Policy, or Strategy	Salient Features to Note With Reference to PSP in Water Services Delivery
The Public Private Partnership (PPP) Act [principal legislation], revised edition of 2017	The Act defines the institutional framework for the implementation of PPP agreements between the public sector and private sector entities and also set rules, guidelines, and procedures governing the development and implementation of PPPs in Tanzania.
The Water Supply and Sanitation Act 2019	One of the objectives of the Act is to promote and ensure the right of every person in Tanzania to have access to efficient, effective, and sustainable water supply and sanitation services for all by promoting public sector and private sector partnerships in provision of water supply and sanitation services. The act also defines one of the functions of the RUWASA as facilitation of private sector engagement in the provision of rural water supply and sanitation services.
Water Sector Development Programme – Phase II: (2014-2019)	One of the strategies adopted under WSDP II is the active participation and involvement of the private sector through the PPP in the delivery of sanitation and hygiene services. It states that "*Services like management of solid waste and liquid waste will be greatly managed by the private sector. Also, the operation and maintenance on the public toilets, toilets in bus stops, transport hub etc. will be taken care of by the private sector.*" In water supply: The strategy provides that one of the management options to be considered for rural water supplies is the use of autonomous private operators. While encouraging the use of private operators for O&M of rural water supply schemes, in order to create stronger incentives for sustainability, the strategy reckons that "*The potential of private operators comes with a risk of excessive profiteering. But putting in place a good contract, substantial bond and regulatory support from district levels will reduce this risk.*" To ensure Sustainability of Urban Water Supply and Sanitation Services, the strategy adopts involvement of private operators for service delivery in urban water utilities but provides that "*before embarking on this option, a study on various models being implemented in some neighboring countries like Zambia and Uganda is proposed, followed by piloting.*"

[51] World Bank. 2017. Public-Private Partnerships Reference Guide – Version 3. Washington DC, USA.

Key Legislation, Policy, or Strategy	Salient Features to Note With Reference to PSP in Water Services Delivery
Action plan for enhancing private sector participation in the water sector 2018-2025	The main objective of the action plan is to increase the number of private sector players investing in both capital and operation of water and sanitation services in Tanzania. Other specific activities under the plan include to establish a PPP Desk within the MoW to deal with all PPP matters relating to water projects.

3.4.2 Past and Current Experiences With PSP in the Water Sector in Tanzania

Since 2000, there have been several attempts in Tanzania to involve the private sector in water supply services beyond the traditional Engineering Procurement and Construction (EPC) contracting relationship. The majority of these PPPs for water and sanitation services were initiated as conditions for accessing development funding imposed on the GoT by a cohort of multilateral financial institutions (WB, AfDB, and European Investment Bank) with the aim of bringing technical and managerial expertise to the urban water sector. Part of these conditions included that the GoT's need to create an enabling environment for private sector participation through piloting PPP structures for delivering WASH services. These attempts have had mixed outcomes. While several attempts were abandoned in the development phase; others have proceeded to the signing of contracts. Several "informal" private sector projects emerged that, although not fully following the established procedures for undertaking PPPs, have been instrumental in filling the service gap where formal government services have been inadequate for both water supply and sanitation services.

The most notable attempt at a large-scale PPP to achieve water sector results is the failed Dar es Salaam water operations lease contract with City Water and with the follow-on Dar es Salaam Water and Sewerage Corporation (DAWASCO) which took over City Water Operations. This partnership started in 2003 when the GoT signed a ten-year lease contract with City Water Services Ltd. (a private company registered in Tanzania, with shareholders in the United Kingdom, Germany, and Tanzania) to operate and maintain the infrastructure for water and sanitation services in Tanzania's largest city, Dar es Salaam. The joint public-private venture, initially hailed as a success story of PPPs in the water sector in Sub-Saharan Africa upon signing, failed acrimoniously after two years in 2005 when the GoT terminated the contract with City Water Services and established a new public firm, DAWASCO, to take over the contract. The case, and termination for the contract, would eventually end up at the International Centre for the Settlement of Investment Disputes. Box 9 summarizes the reasons for the failure of the PPP arrangement.

Box 9: Dar Es Salaam Water Supply PPP – Why the Partnership Failed

The lease specified that DAWASA would own all fixed assets and be responsible for financing and developing water supply and sanitation facilities, and City Water Ltd. would be responsible for operating and maintaining the infrastructure including employing DAWASA's staff and billing the customers, at agreed tariffs. The failure of the partnership was attributed to three main reasons:

1. Illegal water connections;
2. Failure to pay water bills by water customers; and
3. Poor state of existing infrastructure requiring the private operator to invest higher than had been estimated in infrastructure renewal.

Eventually, City Water was forced to disconnect customers who were not paying bills (resulting in lower than expected revenues for them) and was forced to stop installation of 170,000 new connection because the water pressure was so low and intermittent that the new connection could not work. To add to City Water's problems, the local investor—which was put as a condition for foreign firms—failed to honor their equity contribution, further stifling the operator of cash needed for its operations.

Source: Based on a case published by the Richard Ivey School of Business, University of Western Ontario on examples of failed water sector PPPs in the world.

Eventually the DAWASA-DAWASCO partnership also failed due to significant governance arrangement challenges between the parties to the partnership. This episode created reluctance in the public sector for engaging in large PPPs in the water sector in Tanzania; while still considered as potential opportunities, there is a lot of caution being exercised. As a result, EPC contracts remain the principal mode of partnership between the public water utilities and the private sector.

Current GoT Focus on Water Sector PSP

Guided by the recently adopted Action Plan for enhancing private sector participation in the water sector 2018-2025, the GoT's intent to deepen PSP in WASH services is largely focused on the following three partnership models:

1. Build-Operate-Transfer (BOT) or Build-Operate-Own (BOO) projects to produce and sell bulk clean water to UWSSAs;
2. Service-level contracts for the O&M of water supply and sanitation infrastructure in rural areas; and
3. Blending of public financing of WASH services with Private/Commercial Finance.

Table 7 summarizes some of the priority WASH projects currently under development in the PPP pipeline while Box 10 describes a currently ongoing PSP project involving design, installation, and O&M of rural water systems in two regions.

Table 7: Summary of Prioritized WASH Projects Under Development to Be Procured Through a PPP Model in Tanzania

#	Project Name	Project Description	Procurement Method	Project Value (US $)	Contracting Government Agency
1	Dareda Water Supply Project	● Construction of Intake Structures; Construction of seven storage tanks of total Capacities of 150 CM ● Installation Transmission and distribution network by 102 kilometers (km) Household Connection 700 customers ● Construction of 700 domestic points Construction of one intakes 300 CM ● Construction of one sedimentation tank of 150 CM ● Construction of 60 chambers (Air valves, Valve chambers)	Solicited BOT	$4.3 million	Babati Urban Water Supply and Sewerage Authority (UWSSA), Manyara
2	Dar es Salaam Water supply distribution network project	● Construction of Distribution Network of about 18,097 km	BOT	$66 million	Dar es Salaam UWSSA
3	Moshi Municipality Sewerage System Improvement Project	● Rehabilitation of dilapidated sewers and Expansion Works for various Sewer lines in Korongoni ward, central business district. ● Trunk Main sewer line to new Waste Stabilization Pond at Msaranga ● Expansion of existing Waste Stabilization Ponds system ● Construction of new Waste Stabilization Pond with capacity of 876 CM to serve new areas of Kiboriloni, Msaranga, and Ng'ambo wards ● Supply of two Cesspit Vacuum truck with 6,000lts Capacity	Solicited - Design and Build (DB)	$15 million	Moshi UWSSA, Kilimanjaro

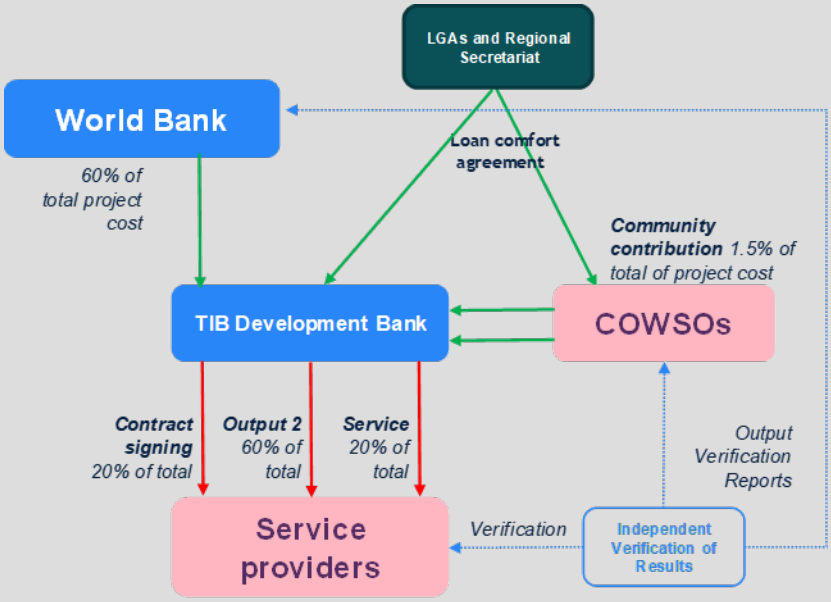
#	Project Name	Project Description	Procurement Method	Project Value (US $)	Contracting Government Agency
4	Improving accessibility of water and sanitation services	● Rehabilitation of water supply networks ● Extension of new water supply networks ● Construction of office buildings ● Construction of sewerage system ● Capacity building of the stakeholders	Solicited - BOT	$4 million	Ngudu Urban Water Supply & Sewerage Authority, Simiyu Region
5	Design and Construction of wastewater stabilization pond and purchase of cesspit emptier truck in Nzega	--	Solicited - BOT	$0.7 million	Nzega Urban Water Supply & Sewerage Authority, Tabora region
6	Shinyanga Water Supply Improvement Project	● Rehabilitation of treatment plant ● Construction of rising main ● Construction of additional network coverage of about 210 km ● Construction of water kiosks ● Connecting 10,500 new customers	Solicited - BOT	$5.6 million	Shinyanga Urban Water Supply and Sewerage Authority, Shinyanga region
7	Improvement of Water Supply and Sanitation in Vwawa and Mlowo Towns	● Dam construction ● Construction of treatment plant ● Construction of transmission main ● Construction of three storage tank ● Construction of 250 km distribution network	Design - BOT	$23 million	Vwawa-Mlowo Urban Water Supply and Sewerage Authority, Mbeya region
8	Tanga City Water Supply Improvement Project II	● Extension of Water Treatment Plant ● Rehabilitation of Water Treatment Plant ● Construction of Clear Water Tank ● Construction of Gravity Main ● Construction of Distribution Network	BOT	$4.4 million	Tanga Urban Water Supply and Sewerage Authority, Tanga region

#	Project Name	Project Description	Procurement Method	Project Value (US $)	Contracting Government Agency
9	Use of PBC model to address utility water loss	● The overall objective of this initiative is to reduce Water Losses (WLR) for DAWASA while simultaneously improving the network efficiency, service standards, and customer base leading to increased revenues in DAWASA by engaging a private contractor in a long-term ++Contract	Design - Build - Operate	$20 million	DAWASA - Dar es Salaam Water and Sewerage Authority

Source: MoW, PPPs Desk Office

Box 10: Case Study – Piloting of PPP for Rural Water Services in Singida and Dodoma Regions

Through financing from the WB, the Project—Accelerating Solar Water Pumping via Innovative Financing—is currently supporting 82 villages in the Singida and Dodoma regions to increase access to improved water sources through a PPP model for financing and maintenance of the installed infrastructure. The WB provides funding through TIB Development Bank Ltd. of up to 60 percent (US$ 4.2 million) of the total project cost to retrofit diesel generators with solar power in existing water schemes. The beneficiary communities make their contribution of 1.5 percent of the total project cost then, through the COWSOs, take a commercial loan from TIB Development Bank of 38.5 percent of the total project cost payable over a four-year term at an 11 percent interest rate. To ensure sustainability of the projects and community's ability to repay the loan, the project adopts a PPP model where a private sector contractor installs and then implements five-year maintenance contract for the installed systems. Additional works involve installation of remote sensing technology to aid real time maintenance; chlorination to improve water quality; and installation of pre-paid meters at domestic water points to aid effective transparent management and accounting for collected water user fees that are used to cover maintenance cost repay the TIB loan. The project financing structure is such that funds are released to the private sector actors only upon delivery of outputs. Additionally, the participating COWSOs have signed loan comfort agreements with their respective LGAs and Regional Secretariats to define in detail the steps to be followed in case COWSOs run into difficulties repaying the loan.



The project is designed to be implemented in phases to ultimately reach 840,000 direct beneficiaries served by 280 photovoltaic pumping (PVP) systems. The phase 1 covering 82 villages in currently under implementation with private sector partners already identified and ready for implementation.

The aim of the innovative project design is three fold: 1) reducing O&M costs of the water supply schemes by retrofitting diesel system with solar power, thus making it possible to lower the price of water to users and/or expand service to unserved parts of the communities; 2) transitioning the sector from solely relying on grants through combining debt financing and output-based subsidies to reach poor communities in rural Tanzania; and 3) taking an important step toward leveraging private sector financing.

The Project will be the first to involve the private sector at scale in rural water service provision through performance-based service contracts to install and maintain rural schemes. Being designed for private sector involvement, the Project will represent a valuable business opportunity to Tanzanian service providers and may thus contribute to job creation. This is of particular importance to rural areas and is fully in line with the GoT's industrialization agenda on job creation.

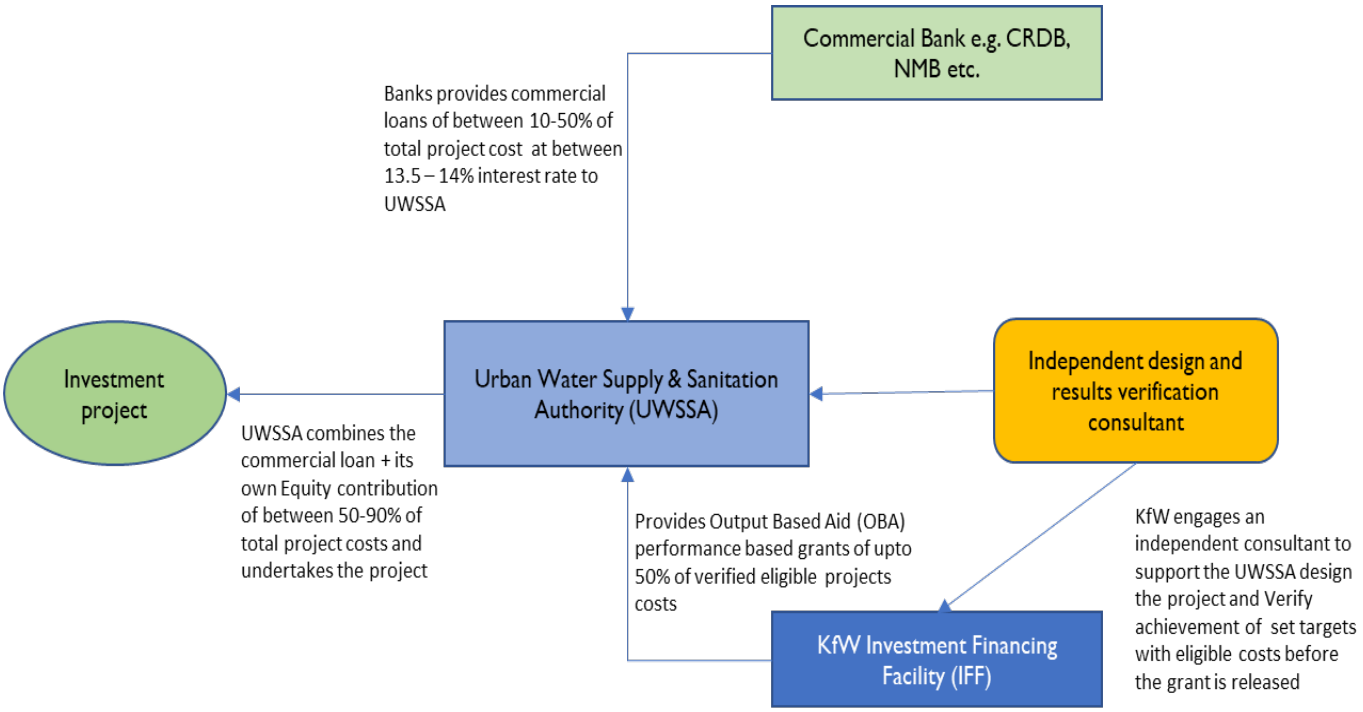
Source: TIB Development Bank KIIs & WB, 2019.[52]

[52] WB, 2017, Accelerating Solar Water Pumping via Innovative Financing – Project Operations Manual.

Blending Public Finance With Private Sector Capital for Urban Water Authorities

As indicated earlier, the GoT recognizes that it needs about US $1.2 billion annually to attain its universal access to WASH targets by 2030. Out of this, only about US $885 million is realistically available. This presents a significant sector financing gap. To bridge this gap, the GoT is tapping into non-traditional funding sources for the water sector including taking commercial bank loans to finance new infrastructure development as well as rehabilitations. To this end, the MoW and KfW partnered to establish the Investment Financing Facility (IFF) for urban water authorities to enable the utilities to access commercial loans from local private sector banks to finance infrastructure investments such as connection of new service areas, rehabilitation and expansion of networks, and installation of water meters. Figure 24 shows the structure of the IFF facility. To date, some of the completed projects financed under the IFF facility are shown in Table 8.

Figure 24: Schematic Overview of the IFF Scheme in Tanzania



Source: KfW.

Table 8: Completed Projects Financed Under the IFF Project in Tanzania

Client	Name of Project	Description of Project	Project Financing		
			Commercial Loan	Utility Equity	Amount Provided Under IFF as Performance Grant (50% of total eligible project costs)
Iringa UWSSA	Kitwiru Water Supply Project (December 2015 to December 2016)	• Construction of pump house, raising main and distribution network • Construction of 300 CM storage tank • Supply and Installation of one set of pumps with associated accessories and connecting a total of 900 new customers	US $240,000 from CRDB Bank	US $137,000	US $120,000
Moshi UWSSA	Mang'ana Spring Source Water Supply Project (September 2017 to December 2018)	• Construction of intake at Mang'ana source and 1 km gravity main • Construction of 8 km transmission main and 7 km distribution branch lines • Additional billing of not less than 1,000 new customers in the proposed new supply areas • Achieve collection efficiency of not less than 90% within the entire service area of MUWSA	US $783,000 loan from NMB Bank	US $280,000	US 411,000
Kahama-Shinyanga UWSSA	Mhungula Water Supply Improvement Project (December 2015 to December 2016)	• Excavation, pipe-laying, and back-filling of 6 km pipeline increasing connected customers by 5.3%	US $52,000 loan from CRDB bank	US $5,800	50% of actual eligible total project costs

Source: MoW.

Bureaucratic bottlenecks and lack of WASH knowledge among financial sector players are hindering lending for WASH activities. The pilot phase of the IFF scheme yielded commendable results despite some challenges. These included significant bureaucratic blockages in the loan approval process, and a lack of WASH sector knowledge within banks.[53] Moreover, the credit risk assessments they do are mostly along the lines of any other purely commercial lending activity they do and may not therefore be able to address some important nuances in the sector. One of the requests they had for actors in the sector is to provide targeted training to non-WASH experts in the financing sector to establish a better understanding of the sector and how best to package their financing products and formulate WASH financing business strategies.

3.4.3 Independent "Informal" Private Sector Participation (PSP)

Emergence of small scale "informal" private sector entrepreneurs to fill the service gap: While the GoT's current frameworks and legislations are largely geared towards enabling large-scale multi-million dollar infrastructure projects such as the City Water – DAWASA lease agreement, there are a plethora of "Independent entrepreneurs" providing water supply and sanitation services in various cities and even in rural areas. Some of these providers are registered as ordinary businesses by the LGAs while others operate rather "informally" without formal recognition as WASH service providers.

These independent private sector players include: 1) distributors, who distribute water per container or 20-liter jerry can; 2) truckers who deliver water to households, business premises, institutions, or organizations; and 3) service providers who have constructed a small network that serves hundreds of households within a locality. While some entrepreneurs purchase and resell utility-produced water for users far off the formal grid, others get water from private sources including boreholes and shallow wells.

For sanitation and hygiene services, the private sector actors include: 1) providers offering pit emptying services through mechanical desludging of septic tanks, and sometimes latrines; 2) manual pit emptiers mostly for individual pit latrines; 3) operators who have constructed and are managing small fecal sludge treatment facilities; and 4) manufacturers and sellers of sanitation products, including plastic latrine slabs and locally-constructed concrete latrine slabs.

Many private operators are from low-income, informal settlements where public utility services are not available to residents. There are also other market niches serviced by private providers, *e.g.*, middle-income settlements where homeowners and real estate developers build their own on-site water and sanitation systems.

[53] The majority of the commercial banks interviewed mentioned that one of the challenges they faced when structuring the loans to UWSSAs was that they did not have staff with in-depth knowledge of the sector, hence they had to rely heavily on external consultants and advisors.

Box 11 describes a promising independent small-scale private sector provider of fecal sludge management (FSM) services in Dar es Salaam City.

Box 11: Usafi wa Mazingira na Watu (UMAWA) – Private Operator of Fecal Sludge Treatment Facility in Dar es Salaam

UMAWA started off as a community-based non-profit organization located in Kigamboni suburb of Dar es Salaam. Part of their initial mandate was to facilitate community trainings on good hygiene practices. As they did this, they saw the need to provide sanitation services since the community served was off-grid thus did not have any utility sanitation services. As a result, UMAWA established a private sector enterprise arm that collects fecal sludge from pit latrines and septic tanks using gulpers and deposits these into a 4,000 liter per day Decentralized Wastewater Treatment System (DEWATS) plant on a 500 m2 piece of land. At the plant, UMAWA turns the fecal sludge into biogas for cooking and dried organic fertilizer for farming. UMAWA has expanded to serve clients in five wards—Kigamboni, Kijibweni, Kivukoni, Kibada and Mjimwema—sometimes traveling as far as 40 km away from the facility to desludge latrines. UMAWA started the enterprise in 2012 with only handheld mechanical pit emptiers. As the demand grew, they secured two loans, Tsh 5 million (US $2,200) and another Tsh 10 million (US $4,500), from a local microfinance organization—Tujijenge Tanzania Limited—for purchasing new emptying equipment.

The business is small scale but profitable. UWAMA's director indicated that they empty 90-150 pits monthly generating about Tsh 7.2 million per month. The enterprise has categorized different services depending on client characteristics (household latrines, institutions, or business premises) and distance from the treatment facility. The prices range from Tsh 30,000 (US $13) to Tsh 50,000 (US $20) per desludging trip for household latrines and can go up to about Tsh 100,000 (US $50) for business owners. To expand the revenue base of the enterprise, UMAWA has negotiated contracts with guest houses and restaurants to whom the company offers pit emptying for a monthly fee so as to provide a more stable income apart from income generated from individual household customers.

There are opportunities for expansion, but financing remains a challenge. Since the enterprise's establishment in 2012, demand has continued to increase to an extent that sometimes the current facility gets overwhelmed forcing UMAWA to keep clients on a waiting list for desludging services. They currently are sourcing for additional financing to build an 80,000 liter sludge storage tank at the DEWATS plant to avoid keeping clients waiting. UMAWA asserts that there is significant opportunity to expand the business in districts and small towns across Tanzania. They have already received numerous requests from several DCs, some of whom have expressed willingness to allocate land for their FSM plant. UMAWA, at the time of the interview, had a letter from the Permanent Secretary of the Ministry of Health introducing UMAWA to PO-RALG and assuring their commitment to provide an enabling environment for UMAWA to expand business in Urambo, Kasulu, Kahama,Kigoma-Ujiji, Mpwapwa, and Lushoto towns. The key constraint hindering this expansion, according to UMAWA, is access to finance.

Photo 3: Images of the UMAWA Fecal Sludge Treatment Facility System, Kigamboni, Dar es Salaam

3.4.4 Leveraging on the Private Sector for Innovations and Technology Incubation

Private sector as incubators of WASH innovations and technologies: Several respondents mentioned that the private sector role in accelerating WASH results is acting as an impetus for innovation for developing solutions that may require a long gestation or payback period. Once such innovation has shown proof of concept, it could be scaled up by the GoT through taxes or through loans. One innovation has been the use of pre-paid water meters to manage revenue at rural water points. Two private sector companies, Grundfos and E-water Pay Ltd., have introduced this technology in several projects implemented by DPs and INGOs. From their own assessment, the technology has demonstrated proof of concept and is ready for wider scale-up.

Challenges in deploying innovations and technology in WASH: Evaluating the performance of a new innovative technology such as pre-paid meters should take into consideration the broader system's architecture and support mechanisms that are necessary for the introduced technology to work effectively. While the technology shows promise, it still depends on the management and functioning of existing water infrastructure, the surveying and hydrology for the pumps they service. E-water Pay Ltd. provided a case example comparing performance of their smart meters in two different communities to highlight some of the things that can go wrong when new technology is not properly introduced into the wider system context it is expected to support.

Box 12: WASH Technology Is Only as Good as the System It Supports, Comparing Msowero and Mvumi Pre-Paid Water Meters (aka "Water ATMs")

E-water Pay Ltd, attributes the underperformance of its installed meters in Mvumi to wider system failures as compared to a similar prepaid meter in Msowero which has worked well because the systemic elements connecting the technology are working well.

Through the USAID WARIDI project, E-water Pay was contracted to install 18 prepaid meters in Msowero and 26 in Mvumi. While the community in Msowero continue to enjoy uninterrupted access to safe water, the pre-paid water meters in Mvumi dispensed water irregularly leading the community to raise a complaint. An E-water Pay Ltd. investigation revealed that while the meters were working fine, the problem was with the wider elements of the water supply system that ultimately fed the Water ATMs at the Domestic Water Points. Within a span of eight months, the CBWSO in Mvumi had replaced their water pumps four times. E-water Pay established that the failure was caused by motor burnout resulting from build-up of sediments in the borehole. While all the water scheme components at Msowero are greenfield—a new borehole, new tank, and new water points—the Mvumi project involved only adding new pre-paid water meters to an existing borehole, existing tank, and pipelines. The borehole at Mvumi built up sediments which ended up blocking the pump, filling the pipes and the water storage tank. Eventually the entire system failed to deliver water for residents to access through the meters at the Domestic Points.

The different experiences in introducing new innovative technology in these two communities points to the need for a better understanding of the management and functioning of existing water infrastructure as well as the surveying and hydrology for the pumps to which the prepaid meter is connected. It also depends on the collaboration with the community and LGAs where the systems are installed for long-term sustainability and maintenance of water points.

3.4.5 Public-Private Sector Multi-Stakeholder Platforms for Water Security

Apart from the formal large-scale PPP projects, the small-scale independent services providers and private sector participation in the sector—through the traditional competitive EPC[54] contracting models and large private sector corporations who mostly use large amounts of

[54] EPC contracts are the most common form of contract used to undertake construction works by the private sector. Under an EPC contract, a contractor is obliged to deliver a complete facility to the purchaser who need only turn a key to start operating the facility. It does not ordinarily involve any form of performance-based post-construction operations and maintenance services.

water—are increasingly making their contribution towards ensuring water security in Tanzania. Private sector corporations such as the Coca-Cola Company, Serengeti Breweries, and Kiliflora Ltd. are actively engaged in interventions aimed at reducing their internal "within the fence" water footprint by adopting water-efficient production and investing in wider water catchment conservation measures to preserve one of their most valuable inputs into production. Some examples of interventions where private sector actors are making a significant contribution include the Sustainable Water Management Partnership (SUWAMA) which brings together private sector actors such as Kiliflora Ltd., largest grower of roses in Tanzania, the Tanzanian Horticulture Association, and Pangani BWB, among other partners, to collaborate in solving water challenges in the Usa River sub catchment.[55] In addition, the Coca-Cola Company partnership with USAID under the Water and Development Alliance initiative supports the installation and upgrading of solar powered water systems in rural Tanzania. Box 13 describes the efforts of the Tanzania 2030 Water Resources Group (WRG).

Box 13: Tanzania 2030 Water Resources Group – Collaborative Public-Private Action towards Water Security in Tanzania

The 2030 WRG, hosted within the WB, was created in 2008 as a global platform to support countries to achieve water security by the year 2030 through facilitating collective, evidence-based action between the government, private sector, and civil society. In Tanzania, the MoW, which chairs the national 2030 WRG Multi-Stakeholder Forum, has taken steps to strengthen the forum, in effect turning it into an advisory platform within the National Water Board.

Strong private sector engagement for water security:

- The 2030 WRG facilitates an annual Private Sector Roundtable in Tanzania that aims to improve understanding of how the private sector has been engaged in WRM and identify opportunities for new continued formal engagement. Some of the key members of the platform include Kiliflora Ltd, Kilombero sugar company, Serengeti Breweries Ltd., Olam Coffee, the Tanzania Horticultural Association, and Twiga cement.
- The 2030 WRG platform has supported the establishment of The Kilimanjaro Water Stewardship Platform focusing on the Kilimanjaro catchment area, and The Great Ruaha Restoration Campaign that brings together government, the private sector, and civil society to address the water crisis in the Great Ruaha River.

4.0 CONCLUSIONS

4.1 ASSESSMENT QUESTION 1: WHAT ARE GOT'S PLANS AND NATIONAL DEVELOPMENT PRIORITIES FOR INCLUSIVE AND SUSTAINABLE SOCIO-ECONOMIC GROWTH AND HOW DO THEY INTERLINK WITH AND AFFECT TANZANIA'S WATER SECTOR DEVELOPMENT?

This section details the assessment team's conclusions and identifies opportunities for intervention for assessment question 1.

4.1.1 Conclusions

1. **Declining water resources endowment is a risk to Tanzania's socio-economic growth**. The rapidly declining water resources endowment puts Tanzania's economic growth and realization of its development targets as envisioned in the TDV 2025 at risk.
2. **Catchment degradation is driven by structural poverty**: Long-term structural factors contributing to poverty, such as insecure land tenure among smallholder agricultural families, are contributing to the increasing water scarcity in Tanzania. Addressing these structural factors in a cross-sectoral integrated effort is necessary to reduce the

[55] Tanzania-Collective Action Unlocks Water for All; the SUWAMA Usa-River Partnership.

degradation of Tanzania's water resources.

3. **Envisioned industrial growth and mining sector expansion bring with them the risk of increased water pollution**. Industrial growth and expansion of the mining sector are increasingly leading to pollution of Tanzania's water sources, which presents significant health risks.
4. **Low operational capacities and institutional inefficiencies in the BWBs remain a constraint for WRM**. The majority of the BWBs are ill equipped to undertake their mandate. Lacking modern equipment for hydrological data management and use as well as institutional autonomy, the BWBs are struggling to implement their mandates in water allocation, catchment conservation, conflict resolution, and pollution prevention.
5. **WASH and Human Development:** Low levels of access to WASH services threatens social well-being, development of a productive workforce and human capital formation needed to achieve the Tanzania Development Vision of 2025.

4.1.2 Opportunities for Intervention

Despite these challenges, there are a number of opportunities, synthesized from the KIIs and document review, for improving WRM management to sustainably support Tanzania's socio-economic growth trajectory. These are:

- Provide for the establishment of WUAs within catchments and sub-catchments in the basin to better manage WRM functions in Tanzania. The law allows WUAs to partner with the BWBs to undertake some functions, *i.e*., conservation, monitoring compliance with permit conditions, and collection of water permit fees. There are unexplored opportunities for the BWBs to structure performance-based partnerships with WUAs aimed at strengthening their capacity to act as agents of the BWB on some delegated WRM functions. This would not only provide the opportunity for greater citizen voice and participation in WRM, but also increase the efficiency of the BWBs in undertaking their WRM and regulatory functions.
- Review the current WRM Act of 2009 and restructure the institutional framework for WRM in Tanzania. The majority of respondents during the assessment decried the lack of autonomy of the BWB from the MoW, which is stifling their effective functioning. A review of the structure aimed at making the BWB more autonomous would strengthen the country's ability to sustainably manage its water resources. This would also include transforming the National Basin Water Board into a regulatory agency with more enforcement powers and bigger exchequer allocation directly towards WRM.
- Use commonly available modern technologies and equipment with capacities for climate change modeling. The basins would benefit from real-time water levels and catchment management technologies as well as data management systems.
- Capitalize on the increasing interest from private corporations to engage in collaborative WRM in partnership with GoT agencies. Through multi-stakeholder platforms such as the 2030 WRG, opportunities abound for the GoT to establish a platform for resolving conflicts related to water allocation/shared-use and pollution of water from industrial activity as well as to mobilize more resources towards WRM.

4.2 Assessment Question 2: How do GOT's national development priorities and goals in water resource management and WASH and aims of the international donor community align with the SDGs and what are the design implications for USAID collaboration and coordination with others in the international donor community?

This section details the assessment team's conclusions and identifies opportunities for

intervention for assessment question 2.

4.2.1 Conclusions

Despite the GoT's commitments under the WSDP 2 to achieve 80 percent access to improved water sources by the year 2019, current national average for water access stands at only 65 percent. Access to improved sanitation facilities falls even further below the expected 2019 target of 75 percent. The current national average access to sanitation stands at only 25 percent with a noticeable regional disparity. There are some regions such as Kagera where only 7 percent of the households have and use an improved sanitation facility, while 14 regions have access levels below the national average. A high number of non-functional rural water schemes is another significant challenge with studies showing that about 20% percent of water points become non-functioning within just 1 year after construction.[56]

The findings from this assessment reveal the following as the most salient blockages and systemic constraints that has led to the underachievement of the WASH targets:

1. **Low prioritization of sanitation and hygiene investments**: The WASH sector budget allocation in Tanzania is highly biased in favor of water supply investment over sanitation investments.
2. **Neglect of building infrastructure sustainability and institutional strengthening**: Even for the large proportions of the budget allocated for water supply, an insignificant amount is allocated towards operations, maintenance, monitoring, and building staff and institutional capacity. This leads to frequent failure of water schemes and lack of reliable data on the sector status as well as low staff capacity.
3. **Community-based rural water service providers often lack professional capacity** to manage water utility services and have not had training on utility services or management. The mismatch of skills and what is expected of staff often leads to inefficiencies in water supply and sanitation which is a significant blockage to the realization of WASH sector targets in Tanzania.
4. **Blurring of sector institutional mandates and policy clarity constrains effective service delivery**: The final responsibility for policy, particularly for sanitation, is shared among different GoT agencies. This leads to blurring of accountability systems as well as misalignment of priorities and incentive structures among GoT staff, leading to a delay or sometimes a gap in WASH service delivery. This is evidenced in slow and delayed disbursements for implementation of program activities as well as slow response/extension services to citizens.
5. **Limitations on technical capacity to deliver services**: Respondents during the assessment mentioned specific capacity gaps blocking realization of sector targets. These include: 1) lack of commercial astuteness and business development skills among UWSSAs' staff; 2) limited knowledge and capacities on the use of modern hydrological data management and climate change modelling for BWB staff; 3) lack of specialized knowledge on sanitary engineering including on FSM; 4) lack of knowledge of structuring PPP projects; and 5) lack of knowledge among GoT engineers on contemporary technology solutions for WASH, *i.e.*, an advanced metering system for UWSSAs.
6. **Weak sector performance monitoring and management of WASH information**: While attempts have been made to establish sector M&E systems for both water supply and sanitation, these have not been fully exploited and operationalized. Reliable evidence,

[56] Water Status Report 2013, Ministry of Water, Tanzania

data, or analysis to inform decision-making are still marginally available limited and it is difficult to track progress, which impacts the ability to plan WASH investments.

4.2.2 Opportunities for Intervention

- Establishing a new rural water services regulatory agency offers a greenfield opportunity to shape the future of rural WASH services sustainability in Tanzania. Focusing targeted systems building on a professional utility services agency like the RUWASA promises to change the fortunes of many in rural Tanzania with regard to access to WASH services.
- Utilizing existing human resource building institutions—*e.g.*, the Water Institute at Ubungo and Association of Tanzanian Water Suppliers (ATAWAS), the UWSSAs' umbrella association, which provide a platform for building the capacity of UWSSAs to address some of the most pressing challenges (such as high NRW and achieving financial sustainability). Interventions to these and other issues—*e.g.*, the ability of weaker WSSAs to report progress and to request investment support—would include appropriate mixes of technical assistance and financial support for capital improvements.
- Building on performance-based investment schemes already piloted by DFID and the WB to expand service coverage for both sanitation and improved water sources.
- Capitalizing on the availability in Tanzania of an innovative private sector who have incubated and demonstrated proof of concept for various technologies and are ready to partner with public agencies. This offers a significant opportunity to transform WASH service delivery through systematic deployment of new and emerging technologies such a pre-paid water meters and advanced metering systems for UWSSAs in addition to transferring critical skills to GoT staff.
- Integrating food security, nutrition, and healthcare interventions by strategically locating water supply systems around the locus of schools and health facilities as well as ensuring every water supply intervention has components aimed at improving sanitation and securing and protection of water resources. Designing WASH interventions with a "nutrition-sensitive" lens would lead to substantial contributions towards building Tanzania's human capital which is needed to realize the TDV 2025.
- Building on the MoW's recognition of its lack of focus towards sanitation. The MoW has gone ahead to establish a sanitation and sewerage directorate to provide leadership on this sub-sector. This presents an opportunity to build the capacity of MoW staff on sanitation including developing sanitation strategy and financing plan.

4.3 Assessment Question 3: What strategies are being employed in ongoing and planned efforts in WASH and water resources management by USAID, other donors, and NGOs and where have they taken place? How are women and youth being engaged in these interventions? What are their achievements or attributes and what are the bottlenecks/challenges and lessons learned?

This section details the assessment team's conclusions for assessment question 3.

4.3.1 Conclusions

1. The withdrawal of most DPs from the WSDP Basket Fund as well as the relocation of GoT agencies from Dar es Salaam to Dodoma has raised concerns on direct bilateral meetings between GoT and DPs. However, the sector dialogue mechanisms through the DPG are still active, which provides an opportunity to continue the coordination.
2. Mapping of the locations and investment volumes of different sector players (see annexes) across the 31 regions of Tanzania shows the specific areas where there are gaps and

provides for an opportunity to coordinate targeting of WASH investments. As Figure 19 shows, the Lindi, Tabora, Dodoma, Kagera, Singida, Rukwa, and Kigoma regions seem to have less development partner presence compared to other regions. Places like Dodoma and Kagera are some of the regions most affected by water shortage or drought according to our GIS assessments.

3. Continued collaboration, and improved coordination of investment planning by the different WASH actors (including CSOs) will ensure that the neediest regions are supported.
4. Despite an estimated more than US $2 billion funding of ongoing projects from donors towards the water sector, WRM, including addressing some of the underlying poverty and livelihood security concerns contributing towards water catchment degradation, is still very low compared to investment made in water supply. This is in addition to deploying low levels of funding through an approach integrating programming across sectors.
5. Assessment findings support adoption of an integrated approach to WASH programming. Several respondents stated that the investments could deliver more systemic results if they were deployed in collaboration with other sector such as nutrition, food/livelihood security, and healthcare services.
6. While the DPs continue to make significant contributions towards financing the water sector, several DPs are undergoing a restructuring of their portfolios in Tanzania, with several projects coming to an end. This presents a risk of leaving support voids. Of particular import is the closeout of systems strengthening support by DFID which will leave a gap.
7. While a large number of local CSOs are active in the water sector in Tanzania, the majority are marginally active due to lack of access to funding for projects in addition to having weak internal governance structures, which hinders them from accessing donor funds.
8. Despite establishing statuary requirements and minimum thresholds for women engagement in WASH services delivery, women are still largely marginalized in sector management and service provision, yet bear the primary responsibility for ensuring availability of safe water at the household level.
9. The MoW does not have a particular strategy for youth engagement in WASH services. The existing efforts towards youth empowerment towards WASH services provision has been largely supported by DPs.

4.4 ASSESSMENT QUESTION 4: WHAT IS THE INVOLVEMENT OF THE PRIVATE SECTOR IN WATER SUPPLY, RESOURCE MANAGEMENT AND WASH ACTIVITIES IN URBAN AND RURAL ENVIRONMENTS? WHAT ARE THE OPPORTUNITIES AND CHALLENGES FOR ENTERPRISE IN THE SECTOR? WHAT ARE THE INCENTIVES FOR PARTNERSHIP WITH PUBLIC SECTOR SUPPLY? WHAT POLICIES, REGULATIONS AND STRATEGIES ARE IN PLACE TO SUPPORT/ENABLE OR HINDER THE PRIVATE SECTOR FROM PARTICIPATING/WORKING IN THE WATER SECTOR? WHAT ARE THE CHALLENGES AND OPPORTUNITIES FOR WOMEN AND YOUTH TO ACCESS PRIVATE SECTOR AND ENTREPRENEURIAL ACTIVITIES?

This section details the assessment team's conclusions and identifies opportunities for intervention for assessment question 4.

4.4.1 Conclusions

Despite the existence of an independent small-scale private sector entrepreneurs who have emerged to narrow WASH services gap, a number of blockages have been keeping the private sector from better contributing towards realization of WASH targets.

1. The existing PPP legislative framework is cumbersome, and a deterrent to private sector interest. A key issue is that the current legal framework for PSP was designed with large-scale infrastructure PPPs in mind. While the smaller private sector service providers are recognized as legal business enterprises issued with business permits, they face a difficult environment for scaling up investments in the water and sanitation sector as formal utility partners. The majority of small-scale private sector actors with an appetite to venture into the sector are also profit-motivated and see such lengthy processes as a deterrent to their interest.
2. Low tariffs and over-regulation remain a challenge. PSP in WASH services in Tanzania faces a regime of significant pricing and a regulatory requirement designed with monopolistic public water utilities in mind. This includes the threat of expropriation as was witnessed in the Manyoni Singida region where a private sector water operator had built a complete water supply infrastructure in areas out of reach of public utility services, only for the local water authority to claim ownership and forcefully take over the privately-built water supply infrastructure.

4.4.2 Opportunities for Interventions

- Growing interest on the part of LGAs to partner with the private sector, particularly on sanitation. There is a growing realization from the LGA and national MoW officials of the critical value the private sector can add in filling the service gaps of public utilities (*e.g.*, UMAWA has received a considerable number of requests from LGAs to set up FSM as a solution for wastewater management off-grid areas).
- Growing interest among domestic private sector players to venture into the water services space beyond just the traditional EPC process.
- Growing appetite from commercial banks to provide financing to water utilities provides an opportunity to use donor grants and public investments to leverage additional financing from private sector.
- Building on the establishment of a PPP desk at the MoW. The PPP desk provides a platform for targeting capacity building and awareness creation on the value addition of deepening private sector participation in WASH service delivery.

5.0 RECOMMENDATIONS

Based on the assessment findings and conclusions in this report, the assessment team recommends USAID/Tanzania consider the following in formulating its WASH sector support strategy towards supporting the GoT in the realization of WASH targets:

1. **USAID should play a facilitative role in supporting investments in Systemic Community-wide WASH programs in rural areas.**

There is already a considerable investment in urban water supply and large sewerage networks and treatment plants by other DPs. The assessment findings and conclusions indicate that the best value for USAID's WASH sector support would be to maintain their focus on rural areas and expand to underserved urban areas in regional headquarters and growing/emerging small towns. USAID also can support capacity and systems development in District WSSAs to fill the gap that is leaving them behind in the sector's progress. Since USAID/Tanzania support a holistic development change cutting across different sectors beyond WASH, the assessment team recommends that the Mission align the WASH investment strategy with its healthcare, food security, and nutrition support interventions. The design of the next phase of USAID Tanzania's WASH projects should strive to attain the top rung of the SDG 6 ladder – "safely managed drinking

water services: an improved water source located on premise, available when needed and free from contamination). The WASH interventions should also be designed to contribute to improving access to WASH services in health care facilities and schools, addressing underlying land use issues which drive water resource catchment areas degradation and contributing to increasing livelihood opportunities especially for rural women.

2. USAID should focus its support for WRM towards building the capacity of Basin Water Board Offices and community-level WUAs through structured performance-based partnerships with BWBs.

WUAs have the potential to partner with BWBs in undertaking various functions in integrated water resources management. The assessment team recommends that USAID first support the BWBs, particularly those identified as facing a rapid decline in water resources endowment, to undertake an assessment of WUA capacity needs within their basin. Based on the findings of such an assessment and in alignment with the basins' strategic water resources management plan and targets, USAID can support the structuring of a performance-based partnership between selected BWBs and WUAs to undertake certain delegated functions as agents of the BWB (to be paid an agreed fee on achievement of results). This recommended model would be an adaptation of the PbR model for water supply and sanitation currently being supported by DFID and the WB. The proposed model will be focused on WRM at community level. This partnership will go beyond the traditional BWB support to WUAs that is not based on a specific performance agreements and remunerations for services provided.

The goal of such a performance-based partnership would be three-fold:

1. Strengthen the WUAs' institutional and financial capacity for sustainable water resource use;
2. Improve the BWBs' efficiency and effectiveness in undertaking their functions, *e.g.*, enforcement of compliance with water withdrawal permits and collection of permit fees, among other functions to be identified under the agreement; and
3. Improve water catchment areas management and mitigate degradation of water resources.

This support, which should be focused on basins facing the highest water resources endowment risks for various reasons described under section 3.1.2 (Internal drainage, Pangani, Wami-Ruvu and Lake Rukwa),could also include improvement of data management systems and capacity for producing, managing, and utilizing data to guide the sector plans and development.

3. USAID should focus on improving access to sanitation services for off-grid populations in underserved urban and rural areas.

Support private sector interventions in FSM for District headquarters and townships

To address the severe shortage of fecal sludge collection, transport, and treatment systems for off-grid populations in the 83 District and township UWSSAs, the assessment team recommends USAID to intervene by supporting emerging small and medium enterprises (SMEs) offering FSM services under a Sanitation Investment Strategy that adopts an investment rebate approach.

To realize this, USAID should support a detailed FSM assessment across selected UWSSAs to identify:

- Market Risks: This involves factors like market size, customer needs and preferences, customer density, customers' ability to pay, frequency of problem occurrence, product/service pricing, market competition, *etc*. Collect data to establish how conducive the market is for private-sector led sanitation models to thrive completely on earned

revenues.

- Enabling Environment Risks: This involves the supporting factors within which a business operates, covering policies, regulations, availability of FSM/treatment facilities, average distance that FSM trucks need to travel, *etc*. Collect data for each of these factors to establish how conducive the supporting environment is for private sector-based sanitation services provision in the selected towns.

The data analysis would identify opportunities and actionable insights to: 1) support the LGAs and municipalities responsible for sanitation services in the small townships to design a holistic/integrated urban development plan and a city-wide inclusive sanitation approach including operationalizing a regulatory environment that enables private entrepreneurs to provide FSM services; and 2) work with identified private sector actors to design an investment rebate-based private sector-led sanitation investment strategy to improve access to off-grid communities in the emerging townships and District headquarters.

Rural sanitation

USAID should focus investments on improving access to improved toilets in the 14 regions whose current coverage falls below the national average of 25 percent. Working from the premise that there are three broad approaches to rural sanitation:

1. Driving sanitation and hygiene behavior change at the household or community level through educational or community mobilization methods;
2. Focusing on developing or strengthening the market and supply-chain for sanitation technologies; and
3. Designing financing mechanisms for households and businesses to improve sanitation supply and demand.

The recommendation is for USAID to adopt a "market-based" model that integrates elements from all these approaches: identify and build capacity and efficiency of the supply chain + extend affordable financing to households less able to pay through a smart-subsidy scheme + facilitate behavior change for sustained latrine usage.

To design the intervention, an investment in establishing a better understanding of household preferences and market supply in relation to rural sanitation would be necessary in order to deliver more effective and cost-efficient interventions in most severely affected regions.

4. Formalizing a partnership with the new RUWASA, providing capacity building and systems strengthening for rural water services in Tanzania.

The RUWASA is a new organization that holds significant promise for enabling professional management of rural WASH services. This is contingent on the RUWASA's ability to structure and build the internal organizational capacity needed to drive change in its vast service coverage area.

To deliver on its mandate, the RUWASA will need to develop specific capacities, procedures, and guidelines that will assist its staff in developing sustainable infrastructure as well as supporting different service providers in rural areas, including the CBWSOs operations and management of water schemes. These may include:

- Delegated Service Agreement templates and guidelines for CBWSOs: With the expectation that the RUWASA will "regulate" and monitor the performance of CBWSOs, it will need to design guidelines and standards for rural water O&M and Service Agreement contracts.

- CBWSOs competency framework and governance guidelines: These provide guidance on the new reforms to register water organizations and associations as CBWSOs through RUWASA, achieving community agreement on paying water user fees (perhaps as a precondition to building water systems), and as well as how to manage a successful water service enterprise, including setting medium- to long-term strategies and targets and leadership development
- Financing management and accounting guidelines: These provide a standardized system for accounting in rural water schemes including financial reporting standards.
- Capital investment guidelines: The RUWASA will need to develop minimum standards and guidelines to ensure that investment pre-feasibility and feasibility studies are done to establish the wisdom of the investment. Investments should be evaluated using the principles of life cycle costing and the impacts of major investments on both tariffs and service levels fully evaluated.

It is critical that USAID support RUWASA to build a systematic monitoring and rural WASH services information management system. Under the ongoing WB project "Accelerating solar water pumping through innovative financing," the CBWSOs in the Singida and Dodoma regions provide proof of concept that—with sufficient support—rural service providers can be professionalized towards addressing NRW and achieving financial sustainability. USAID's partnership with the RUWASA should be geared toward scaling-up the financing model currently implemented under the project.

USAID should establish a formal partnership MOU with the RUWASA detailing a long-term capacity building and investment support strategy for rural water services in Tanzania.

5. USAID should support the UWSSAs to address NRW and improve the financial viability of the small townships' UWSSAs.

Water utilities in Tanzania already have experience with accessing commercial financing under the KfW-supported IFF. The pilot project with a few UWSSAs has demonstrated the maturity of the financial market as well as the capability of UWSSAs to blend public funding with commercial loans.

Even though the pilot project was focused largely on large regional UWSSAs, the assessment team's recommendation is for USAID to consider scaling up this utility financing approach to the District headquarters and small township UWSSAs who have yet to reach commercial viability but show potential if provided with sufficient technical assistance.

In addition to this support in accessing commercial finance, the team recommends USAID support participating small township UWSSAs to address high NRW levels using modern technologies that attend to both the physical and commercial aspects of NRW. This will require a combination of technical assistance on deployment of such advanced technologies in such a manner that it addresses the systemic challenges facing the utilities and capital investment through blending public funds, grants, and commercial financing to finance the investments through a performance-based mechanism.

6. Women and Youth empowerment

USAID should invest in supporting the design of Women and Youth-focused interventions that:

- Transform gender relations, *e.g.*, through creating opportunities for women and youth to be trained and work in technical roles such as water/sanitation technicians, operators, masons, *etc*.
- USAID to partner with the active women-rights organizations and the GoT to design a

women in Science, Technology, Engineering, and Mathematics (STEM) Mentorship program and establish a women professional network e.g Network of Women in Water in Tanzania.

- Support the MoW to design and implement a policy that guarantees equal access to senior leadership positions in various WASH sector institutions as well as create opportunities for women.
- Support women-led and youth-led social enterprises to provide water supply solutions through service contracts with the UWSSAs and RUWASA.
- Support women and youth-led enterprises in providing sanitation services such as fecal sludge collection and treatment and manufacturing and marketing of sanitation products such as latrine slabs.
- Facilitate youth in development and incubation of WASH technology-based solutions that show potential for scale-up to address identified WASH challenges.

Integrating explicit women and youth focus components into water sector activities should be prioritized along with traditional gender mainstreaming in water activities.

ANNEXES

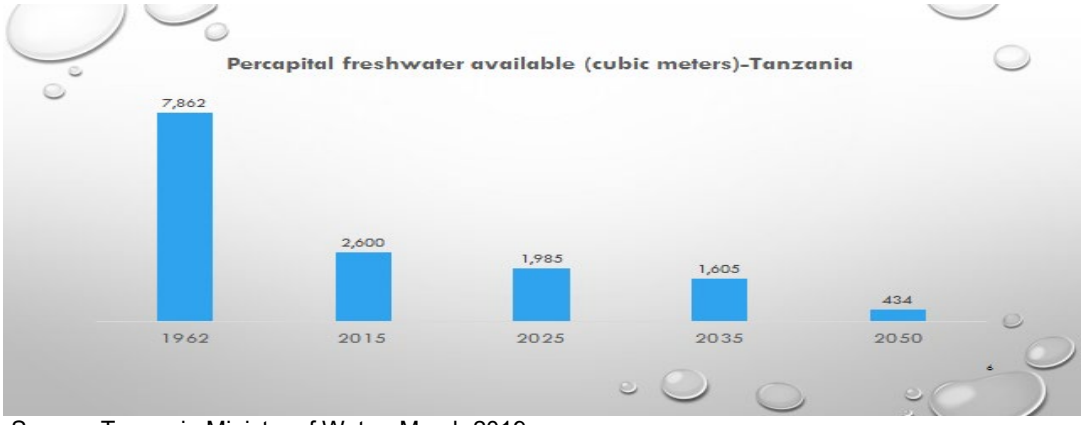
ANNEX 1: ASSESSMENT SCOPE OF WORK

Internal and External Water Sector Assessment to Inform USAID/Tanzania Water Sector Strategy Development

Introduction and Country Context

Water, sanitation, and hygiene (WASH) are vital for public health improvements and essential for sustainable economic growth. Tanzania's progress toward increasing household access to WASH services has been poor. The Government of Tanzania (GoT) reports that in 2018, the percentage of rural population with access to water dropped from 85.2 percent to 58.7 percent due to operations and maintenance challenges. The urban population with access to water dropped from 86 percent to 78 percent. The GoT target is to reach 90 percent urban and 85 percent rural populations with access to water by 2020. In addition, almost 43 million people lack access to improved sanitation (about 80 percent of the population) and according to the JMP, basic access data shows lower numbers than the National data, JMP reports 56.7 percent of Tanzania having access to water supply as of 2017.

Tanzanian growing economy and rapid population growth causes its **water resources** to decline below the international quantities needed for development, in November 2017, the World Bank reported that the Tanzania water resources has declined to below 1,700 cubic meters per capita, the threshold level below which a country is considered to be water stressed, while the GoT through its Ministry of Water has presented a different figure, still such figures suggests that Tanzania water resources is declining due to various factors, expanding economy and population being the major contributing factors.



Source: Tanzania Ministry of Water, March 2019.

The availability of water resources influence Tanzania's development trajectory: It enables or constrains growth of different sectors, exacerbates or mitigates economic shocks resulting from drought and flood, and it impacts productivity through public health and welfare. For example, agriculture is essential to the Tanzanian economy and provides livelihood to the majority of the population, accounting for approximately 31 percent of gross domestic product. However, agriculture alone requires approximately 89 percent[57] of the country's water resources.

As indicated above, Tanzania is not making good progress towards increased access to improved water supply, sanitation, and hygiene services. Improved access to water supplies and sanitation services are an essential component of Tanzania's sustainable economic growth strategy and it requires well-managed water resources. Given that water is a finite resource, its use needs to be

[57] Global average is 70 percent.

prioritized to facilitate the achievement of Tanzania's social, economic and environmental needs. Major GoT development initiatives, and development progress in the country more generally, depend on well-managed water resources.

The GoT's Water Sector Development Program (WSDP) is the main vehicle for managing water resources and delivering safe water and improved sanitation across Tanzania. The WSDP has adopted a Sector Wide Approach Program (SWAp), which incorporates all activities undertaken in Tanzania water sector and is funded by various development partners (DPs) and the GOT. The Program is implemented by the Ministry of Water (MoW); Ministry of Health, Community Development, Gender, Elderly, and Children (MoHCDGEC); Ministry of Education, Science, and Technology (MoEST); President's Office, Regional Administration and Local Government (PO-RALG); and other Implementing Agencies (IAs), including 9 Basin Water Boards (BWBs), 23 Regional Water Supply and Sanitation Authorities (UWSAs), the Dar es Salaam Water Supply and Sanitation Authority (DAWASA), 104 district and small town utilities, and 8 National Water Projects entities and local government authorities (LGAs).

Purposes and Objectives Assessment

The main purpose of this assessment is to collect information that can be used to analyze and identify, within and beyond the water sector, specific blockages that hinder the GoT from achieving its WASH targets and the 2030 SDGs targets on drinking water, sanitation and hygiene. The results of this assessment are expected to inform development of USAID/Tanzania's water and sanitation strategy for the coming five years. The strategy will then guide the design of new water activities and provide sector guidance and objectives for USAID's implementing partners.

In order to effectively complete this work, the consultants will be expected to liaise with water sector stakeholders including, but not limited to: GoT ministries and LGAs; institutions and agencies responsible for water resources management, water supply, sanitation and hygiene; development partners; local and international non-governmental organizations; and academic and research institutions.

Specific Objectives:

1. Analyze and produce evidence on the key GoT development priorities and opportunities in the country and how they can affect the WASH sector to achieve its National targets and 2030 SDGs targets on drinking water, sanitation, and hygiene.
2. Analyze and produce evidence on Political, Economic Socio-cultural, Technological, Legal and Environmental (PESTLE) context in the country and how all this relates to the WASH sector:
    a. Economic Context and Poverty Reduction:
        - Role of external assistance in financing development,
        - Trends in economic growth for the last Five Years and How does the Economic Trends in the five Years Impacted on WASH sector in Tanzania
        - WASH financing: what are the financial flows for WASH and what funding streams are available, from what sources and what part of the sector it goes towards.
        - What is the projected 5 years outlook and how will deliveries of services including WASH will be affected?
    b. Politics and Governance
        - Upcoming 2020 elections and the likely impact on the provision of basic services including WASH
        - Role and effectiveness of civil society organizations to hold government to account in WASH services provision

- Human rights situation and relevance to WASH sector
- What policies, strategies, and legal frameworks exist to support water resources management and WASH delivery for rural and urban setups and how have they been implemented? following the establishment of the Tanzania Rural water and sanitation agency what LGA's **WASH powers and responsibilities and opportunities?**

c. Social Context (Population and Environment)

- Population growth, urban vs. rural in its impacts to water availability and WASH services provision
- Disaggregated analysis of WASH related diseases burden and coverage of WASH service (rural-urban) across geographical regions and related allocation of government resources
- Climate change scenarios and the likely impacts on WASH services
- Impact of environmental degradation on availability of drinking water

3. Carry out a detailed sector review focusing on:

a. Sector players in WASH

- Who are the key stakeholders and what roles do they play in the sector?
- What is the stakeholders' understanding of what key sector priorities are?
- What coordination platforms exist at national and sub-national levels to convene sector actors and coordinate interventions?

b. Integration of WASH across sectors – health, nutrition, and education

- What opportunities exist for integration within GoT ministries and how USAID can support to establish or strengthen it?

c. Donor trends – Detailed summary of donor environment in the WASH sector – (Donor scoping report)

- Which donors have an interest/potential in the WASH sector, what are their strategic priorities and how have they supported WASH to date (financing and nature of programs)?
- How USAID can leverage resources with these donors for more impact and sustainable WASH services?

d. Private sector participation

- What roles are private sector actors currently playing in the delivery of water and sanitation services?
- What are the relevant policies, regulations and strategies that enable or hinder the private sector from working in the water sector?

4. USAID Journey to Self-Reliance:

- Conduct a desktop assessment on the GoT general capacity to **plan, finance, and implement sustainable solutions** to ensure water resources management and to deliver water and sanitation services among citizens

5. Conclusion: Make a set of conclusions about the water and sanitation sector needs and opportunities for donor investment. Based on the above analyses, the Contractor should make a set of conclusions that ***summarize the key sector needs and opportunities***. These should include conclusions related to the relative impact of different options

towards the goal of sustainable water and sanitation service delivery and water resources management.

Methodology

This sector assessment calls for both qualitative and quantitative approach methods to provide answers and information needed in the development of the WASH strategy. This mixed approach calls for in-depth analysis of different documents, consultation with GoT and development partners officials and key informant interviews.

Deliverables

1. The work plan including the following
   - Draft schedule, logistics arrangements
   - Members of the assessment team with roles and responsibilities defined.
   - Proposed methodology
2. In-briefing/Inception Report
3. Final Exit Briefing/presentation
4. Draft assessment report with key findings and set of conclusions
5. Final sector assessment report

Timeframe

The assessment should be completed within two months from the start date approved by USAID, the detailed timeframe will be agreed between USAID and the consultant.

Qualification and skills

The consultant/team should have the following minimum qualification:

1. Vast knowledge of WASH sector in Tanzania
2. Have good understanding of national, regional, and global trends on WASH, water resources management as well as obligations, conventions, and commitment (UN convention, SDGs, *etc*.)
3. Strong analytical skills to facilitate linkage with other sectors such as health and education
4. Excellent communication skills, writing, and facilitation skills
5. Excellent research skills
6. Previous experience in the WASH sector in Tanzania preferably in the WASH project involving the GoT and DPs

ANNEX 2: ASSESSMENT APPROACH AND METHODOLOGY

Assessment Questions for Which Answers Are Being Sought	Method 1: Systematic Document Review	Method 2: Key Informant Interviews (with suggested respondents)	Data Analysis Methods (with potential triangulation across sources)
Understanding Water in Tanzania's Development Context: 1. What are GoT's plans and national development priorities for inclusive and sustainable socio-economic growth and how do they interlink with and affect Tanzania's water sector development? What are the implications for programming in alignment with these plans? 2. How do GoT's national development priorities and goals in water and WASH and aims of the international donor community align with the SDGs and aims of the international donor community and what are the design implications for USAID collaboration and coordination with others in the international donor community? a. What laws, policies, regulations, and strategies are in place to support meeting the SDGs for WASH and are these adequate? b. What are the current institutional arrangements (covering sector coordination, service delivery, regulation, and accountability) and how are these functioning in practice? c. What are the GoT's WASH sector planning, monitoring, evaluation, and learning arrangements and capacities? d. What has been the budgeting and financing track record for the WASH sector and how does this compare with requirements to meet the SDGs? e. What is known of the WASH sector institutional and human capacities and competencies and of capacity development programs to fill gaps?	Systematic document review of strategic, policy and guidance documents from the GoT. Illustrative docs: ● WSDP ● A recent review of the WSDP ● Global WASH strategy ● GoT reports ● Other country assessments and reports	Interviews with GoT agencies and water boards, other international organizations	Coding and triangulation of themes across documents and interviews with disaggregation by group and organizational characteristics

Assessment Questions for Which Answers Are Being Sought	Method 1: Systematic Document Review	Method 2: Key Informant Interviews (with suggested respondents)	Data Analysis Methods (with potential triangulation across sources)
Status of intervention in Tanzania's Water Sector: 3. What recent past, present, and planned efforts in WASH and water access have been made by USAID and other donors and where are the remaining gaps in water supply or WASH services to meet present or projected needs? 4. What roles are private sector actors playing in supporting WASH activities? Where in the country are the private sector working (rural or urban)? and what are the incentives for partnership with public sector supply? What policies, regulations, and strategies are in place to support/enable or hinder the private sector from participating/working in the water sector?	● Systematic document review of USAID and international organizations' strategic documents, program documents and assessments, as well as NGOs' assessments and reports ● Illustrative docs: ○ Joint sector review assessments or reports ○ CDCS (Water section +WARIDI PAD) ○ USAID Global Water Strategy ○ Other donor and implementer assessments and reports ○ Financial assessments ○ Laws and Regulations ○ Needs assessments and gap analysis from other donors, international community and GoT ○ Documents from thought leaders on state of water in the region	Interviews with USAID and international organizations, NGOs, water boards, and private sector including banks, private contractors, and entrepreneurs in water sector	Coding and triangulation of themes across documents and interviews

Assessment Questions for Which Answers Are Being Sought	Method 1: Systematic Document Review	Method 2: Key Informant Interviews (with suggested respondents)	Data Analysis Methods (with potential triangulation across sources)
Developing intervention levers to sustain past efforts and respond to present opportunities for water sector improvement: 5. What approaches and innovations in WASH and water supply interventions from other donor supported programs and NGOs or the private sector have been shown to be effective and could be useful to future efforts in Tanzania? 6. What are the key factors and risks in sustaining water supply and WASH services? How can GoT plan, finance and manage water and WASH for the long term? What approaches in USAID and other development partners future programming would help services be more sustainable?	● Review of program documents, assessments, documented lessons learned, and gap analysis ● Description of intervention approaches and project design documents ● Proposals and strategic documents from other donors, international community and GoT ● Documents from thought leaders on state of water in the region	Interviews and responses from INGOs, NGOs, and other development community	Coding and triangulation of themes across documents and interviews

ANNEX 3: DATA COLLECTION PROTOCOLS

Introduction and Consent

Background

USAID has contracted Data for Development to undertake Systematic diagnostics and assessment of Tanzania's water sector in order to identify the most critical constraints and opportunities facing the Government of Tanzania (GoT) as it works towards achieving its national as well as the 2030 SDGs targets on water resource management and drinking water, sanitation, and hygiene (WASH).

Recognizing the critical role already being played by different partners—multilateral development banks, bilateral country partnerships, international NGOs, civil society actors, grassroots community organizations, research institutions, and private sector actors—the methodology adopted by the team for assessing Tanzania's constraints to (and opportunities for) accelerated progress toward the water resource management and WASH targets[58] is intended to be informed by input and feedback from these partners, the Government and citizens of Tanzania.

The assessment forms a critical analytical foundation of USAID Tanzania Mission's Water Sector Strategy for the next 5 years. The outcomes are intended to aid the identification of a set of priorities where USAID can support the GoT to accelerate progress toward achieving WASH targets in the most effective and sustainable manner.

Confidentiality

Any recording or notes are strictly confidential. Only the evaluation team will listen to this recording or read the notes. The recordings and the notes will be kept in a secure location and all electronic information will be coded and secured. The recordings and notes will be destroyed after the project is completed. Your privacy will be protected; we will not include your name any information in any report that would make it possible to identify you without your consent. Please note that we cannot guarantee full confidentiality because of the group setting, as we cannot ensure that participants will not disclose any information shared during the group interview <For GIs only>. Once again, we ask that what we discuss today remains here with us.

Benefits of Participating in this Study

Although there is no direct benefit to you for being in this study, we hope that the results of our study will help improve the project's design, implementation and the important services it will provide. You will receive no compensation for participating in this interview.

Right to Refuse or Withdraw

The decision to participate in this study is entirely up to you. You may refuse to take part in the study at any point in time, and you have the right not to answer any single question, as well as to withdraw from the discussion at any point. You will not be penalized if you choose to not answer or withdraw from this discussion.

Right to Ask Questions and Report Concerns

You have the right to ask questions about this evaluation and to have those questions answered by us before, during or after the interview. Do you have questions for me at this time? If you have any further questions about the study feel free to contact Nasson Konga through nkonga@engl.com or by phone at +255 767 201618.

[58] WASH in this document encompasses water resources management, water supply, sanitation access and hygiene/public health promotion.

Consent

Do you agree to participate in this study?

1. Yes

2. No

Do I have your permission to audio record the interview? (If Y: also provide verbal assent on the recording once turned on)

1. Yes

2. No

Guiding Question:

The principle guiding question for this assessment is this: *What are the most critical constraints (and opportunities) facing Tanzania in accelerating progress toward WRM and WASH-SDGs in a sustainable manner?*

Different specific protocols shall be applied to different stakeholder groups depending on their role in Tanzania's Water Sector

KEY INFORMANT INTERVIEW PROTOCOL - INTERNATIONAL AND BILATERAL ORGANIZATIONS AND NGOS - (DPs)

Organization:

Name of Respondent:

Date of Interview:

Names of Interviewers:

Interview Questions

Questions related to DP's current interventions in the water Sector:

1. What is your organization's current interventions in supporting Tanzania's water sector development? How does your organization partner with GoT in the implementation of the WSDP? *(feel free to ask any other further probing questions related to the organization's current projects in Tanzania)*
2. How do you see your support evolving in the coming years as you partner with GoT towards achieving its SDGs and regional goals related to WRM and WASH?

Questions related to Understanding Water in Tanzania's Development Context

3. The GoT established the Water Sector Development Programme (WSDP 2006 to 2025) as the sector-wide Water sector Investment Plan fully aligned with Tanzania's national development vision and goals. What have you seen as some of its success stories as well as challenges? How does the GoT approach monitoring, evaluation and learning? How effective would you say the MEL arrangements are?
4. From a natural resource base and Water endowment perspective, what do you see as the key climate change and disaster risks that may affect the development of Tanzania's water sector over the long term?
5. Do you think the GoT is doing enough to address some of these risks? How so?

Questions related to establishing current Status and Emerging Issues in Tanzania's Water Sector

6. Is your organization part of an existing water sector coordination mechanisms/platforms (*e.g.*, the WBG basket fund, WASH sector forum for NGOs, Etc.)? If yes, how are they structured and what results do they pursue? Do you think the coordination is effective?
7. From your experience, what do you see as some of the major strengths and weaknesses in the interactions, coordination and planning between the different GoT water sector institutions/organizations tasked with the delivery of WASH and WRM services to rural, urban, and peri-urban populations?
8. The GoT, through the new Water and Sanitation Act 2019 has created new institutions such as RUWASA, Water Fund, *etc*. What are your views on these reforms? Do you see these new organizations bringing any substantive changes in WRM and WASH services delivery? Are you involved in supporting these new institutions? How?
9. Has <Name of Partner/Org> been involved in technical capacity building for WRM or WASH services with the GoT? What was the nature of the involvement? What capacity gaps do you see?
10. From your organization's interactions with the GoT, what are some of the issues you've observed in terms of budget allocations, disbursements, and financing patterns for WASH/WRM?
11. Has <Name of Partner/Org> interacted with the urban water service providers and the rural COWSOs? What have you seen as key financing, governance, and sustainability challenges for both?
12. What are some of the strengths and constraints you've witnessed in improving access to sanitation especially for the urban poor and rural communities?
13. What could you say about participation of citizens and communities in decision-making and benefit sharing in the water sector in Tanzania? Are women or certain groups socially excluded? In which ways?
14. In terms of leveraging private sector participation in Tanzania's water sector, have there been any success stories? Do you think there is an adequate enabling environment and sufficient GoT prioritization of private sector involvement in the water sector?
15. Generally, within the spheres of urban water supply, rural water supply, access to sanitation and water resources/basins management in Tanzania, what are the most salient issues <Name of Partner/Org> has been dealing with in the recent past?

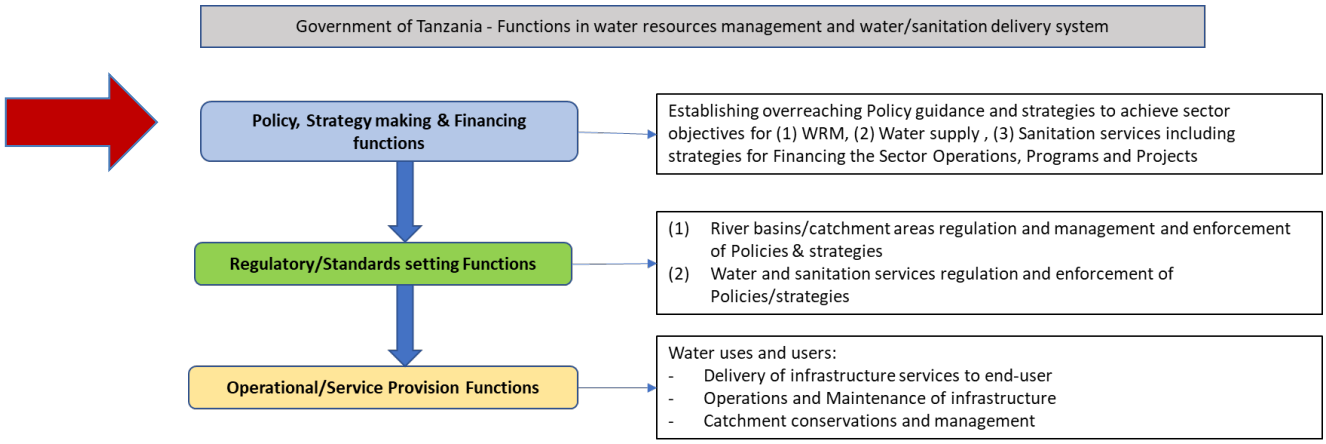
Question related to developing intervention levers to respond to challenges and opportunities for water sector improvement

16. Considering the current status of the water sector and the salient issues you've seen emerging; on which specific areas would you recommend USAID to focus their support for Tanzania in accelerating progress toward WRM and WASH-SDG goals in a sustainable manner?

Thank you very much for taking your time to speak to us and answer our many questions. We appreciate it!

KEY INFORMANT INTERVIEW PROTOCOL - GOVERNMENT OF TANZANIA (GoT) OFFICIALS

This Protocol is specifically designed to be applied for the following high-level policy, strategy making and financing officers of the GoT drawn from the Ministry of Water and MoHCDEGC.



Targeted Respondents for this protocol:

1. Chair – National Water Board
2. Secretary – National Water Board
3. Lake Victoria Water Basin
4. Wami Ruvu Water Basin
5. Rufiji Water Basin
6. Director Water Supply, MoW
7. Assistant Director Sewerage and Sanitation, MoW
8. Director Water Resource Management, MoW
9. Director of Coordination, MoW
10. Director Planning, MoW
11. WASH Team Lead, MoEST
12. WASH Team Lead, MoHCDEGC
13. Director Water Fund

Key Informant Interview Descriptors – GoT – Policy & Strategy Level Officials

Interviews Questions

<u>All stakeholders</u>: General questions related to understanding water in Tanzania's development context

1. The GoT has outlined its medium-term objective of becoming a middle-income country by 2025, What do you see as the role of Water/Sanitation sector in that plan/vision?
2. What do you see as the key risks and vulnerabilities that may affect the achievement of Tanzania 2025 vision targets and the water sector at large?
3. The GoT established the Water Sector Development Plan (WSDP 2006 to 2025) as the sector-wide water investment plan; what has been/is your role in the WSDP?

   <u>Note to Interviewer</u>: there are six possible roles based on the different departments/functions

   1. Water resources/basins management
   2. Water supply
   3. Sewerage and sanitation – MoW
   4. Sanitation and hygiene promotion – MoHCDGEC

5. Sector planning
6. Sector coordination

Depending on the correspondent's role, please proceed to specific questions as per sub-sections under Focus 2.

4. How has the water sector been funded? How are DPs channeling their funds, through WSDP phase 1 and 2 and currently? Potential probe <Historically the WSDP basket fund was used? Has this changed recently? Why?>
5. What are some of the key challenges related to the WSDP, if any?

Specific Questions related to establishing current status and emerging issues in Tanzania's Water Sector.

Water resource management (MoW) and Basin management (Basin Staff and Board):

1. What are the differences in roles between the MoWI-WRM department, National Water Board and the nine water basin Boards? How is WRM coordinated between these different actors? How effective the coordination is? What challenges have emerged in coordination, if any? Do you have any suggestions for improvement? <MoW only>
2. From our literature review, we did notice that Tanzania currently lacks a comprehensive national water resources inventory/database and information system (kind of a "Water Atlas") for the nation's groundwater and surface water to enhance water resources monitoring, planning, development, and management, and flood risk mapping and disaster risk monitoring, Is this true? Why so? Are there currently ongoing or planned interventions towards developing the "water atlas"? <Both MoW and Basin>
3. With agriculture and livestock being the major consumptive use of water, how is this addressed in your basin? <Probe Mkulazi irrigation project for sugar processing, *etc*.>(Basin)
4. What are some of the key water resource-related risks, uncertainties and opportunities the GoT has been addressing in the recent past? *(look out for floods and droughts, as well as pollution and over-exploitation (of both surface and groundwater risks).* How does your office cooperate and partner with communities and other non-government partners in addressing water resource risks and basin conservation issues? <Both>
5. A) GoT through MoW has focused on developing Integrated Water Resources Management Development Plans (IWRMDP) for River Basins in Tanzania. What is the current status? How many IWRMDPs have been completed and how many are under preparations? What is the status of implementation in the already completed? Are there any success stories? What are the challenges in implementing IWRMDPs? How is the GoT planning to overcome these challenges? <for MoW>

   B) What is the status of IWRMDPs implementation in your basin? Are there any successes in the implementation? Any challenges? <For Basin>
6. What can you say are some of the critical elements in the institutional, financial, and infrastructure constraining or enabling the actions of managing water resources in Tanzania? <MoW>
7. Do you think the Private sector has a role to play in WRM? Have there been any success stories of private sector engagement in WRM in Tanzania? Why do you think there's low private sector engagement in WRM? Do you see any opportunities for private sector partnerships in your work? What reforms/changes need to be done to attract more private sector participation in WRM? <MoW

Water supply (MoW):

8. Reports indicate that 19 percent of rural water schemes reportedly failed during the first year of operation, is that true? What in your experience causes this high failure rate? What is MoW doing to stop this high failure rate?
9. With the establishment of RUWASA, how will GoT coordinate the activities at the local level? How will the DWEs/LGAs activities be implemented? With the establishment of CBWSOs, what is the plan for existing community water organizations (COWSOs, WUAs, *etc*.)?
10. What will the new agency RUWASA do differently to ensure sustainability of rural water supply? How will RUWASA relate with the different urban water authorities
11. How will these changes be reflected in the relationship between MoW, RUWASA, and EWURA in the regulation of water supply?
12. What are the key challenges you've seen in urban water supply? What opportunities do you see for improvements especially for informal settlements and peri-urban areas?
13. The GoT transferred district responsibilities for water supply to district engineers office reporting directly to the MoW as opposed to PO-RALG, why was this change necessary?
14. What form of collaboration is in existence between water supply and water resources management at the local (LGA) level? Do you think there is enough coordination to ensure conservation and sustainability of water resources at the local level? What can be done differently to ensure sustainability?
15. The GoT has established the National Water Investment Fund (NWIF) to finance investments in rural water supply, how is it proposed to work? In your opinion, do you think this new Fund will accelerate achievement of SDG goals? How different is it from other efforts?
16. Do you think the private sector has a role to play in water supply? Have there been any success stories of private sector engagement in water supply in Tanzania? Why do you think there's low private sector engagement? Do you see any opportunities for private sector partnerships in your work? What reforms/changes need to be done to attract more private sector participation in water supply?

Sector Coordination/Sector Planning (MoW):

17. How does the GoT plan and coordinate all water sector programs within government and with external partners (DPs, NGOs)? What challenges have you faced in planning and coordination in the sector? What has worked well which you think should be improved on? **(Both)**
18. The WSDP is supposed to be joint sector-wide planning and coordination forum, is it still working well? (*Follow up with a qualification question depending on the response given*). **(Coordination)**
19. From a budget planning perspective, reports indicate that water sector budget has increased by 79 percent. But despite the huge increase in budget allocations, the sector has experienced low budget execution, resulting into low actual spending (only 40 percent spending rate over the last five years), why is this so? What causes this low spending rates? **(Planning)**
20. What is the proportions of allocation across WRM, water supply, and sanitation? Recent analysis shows that GoT allocates most budget for water supply and quite little for

sanitation and WRM? Why is that so? Is that likely to change in the future? How do you see it changing? **(Planning)**

21. In terms of gender and social inclusion, what are some of the key issues for the water sector? How is MoW addressing these issues? **(Both)**
22. In your role as director, have you seen any success stories of private sector engagement in water sector in Tanzania? Why do you think there's low private sector engagement? Do you see any opportunities for private sector partnerships in the sector? What reforms/changes need to be done to attract more private sector participation in water sector? **(Both)**

WASH: Sanitation/sewerage development (MoW) & sanitation and health promotion (MoHCDGEC):

23. According to World Bank reports, the rural water supply component of WSDP 1 only allocated $24.2 million (less than 2 percent of the total) for rural sanitation. Why this little compared to water's 98 percent? (MoW)
24. Does the MoH coordinate with the MoW on sanitation? How? What are some of the challenges you face given that you are under two different ministries? (MoW)
25. Do you think the private sector has a role to play in sanitation services delivery? Has there been any success stories of private sector engagement in sanitation in Tanzania? Why do you think there's low private sector engagement? Do you see any opportunities for private sector partnerships in delivering sanitation services? What reforms/changes need to be done to attract more private sector participation in sanitation? (MoW and MoHCDGEC)
26. The National Sanitation Campaign (NSC) is intended to stimulate demand for and improve the supply of sanitation nationally to deliver health and education improvements, how does it work? What are some of its success stories? What challenges have you seen during its implementation? (MoHCDGEC)

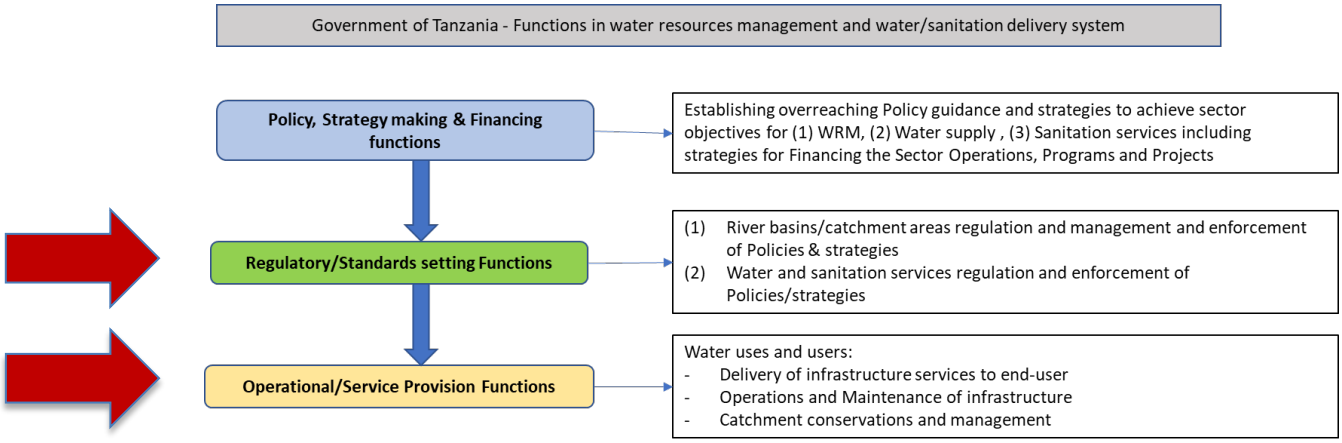
All Stakeholders: Questions related to intervention opportunities for water sector improvement

27. Looking at the current water sector in Tanzania, which policies, programs, or opportunities do you think remain under explored and if explored would best help Tanzania accelerate achievement of its targets?
28. Considering the current status of the water sector, what are the challenges and opportunities USAID should focus on addressing in the next five years in order to support the GoT in accelerating progress toward WRM and WASH SDG goals?
29. With agriculture and livestock being the major consumptive use of water, how is this addressed under the national strategy?
30. Specifically, to your role in the sector, how would you recommend that USAID partners with and support you in delivering your mandate?
31. What are the key climate and disaster risks and vulnerability/threats that affect water resources management in your basin? <Probe for large projects - hydroelectric dam in Rufiji basin *etc*.>

Thank you very much for taking your time to speak to us and answer our many questions. We appreciate it!

KEY INFORMANT INTERVIEW PROTOCOL – REGULATORS AND SERVICE PROVIDERS

This Protocol is specifically designed to be applied for water sector regulatory agencies and service providers.



Targeted Respondents for this protocol:

1. EWURA
2. RUWASA
3. MORUWASA
4. DAWASA
5. IRUWASA
6. DUWASA
7. MWAUWASA

Interview Questions

General Questions related to Understanding Water in Tanzania's Development Context

1. How much are you aware of the Water Sector Development Program (WSDP 2006 to 2025)? What has been/is your organization's role in the implementation of the WSDP?
2. Phase 1 of the WSDP received more than US $1.4 billion in funding, of which US $367 million (26 percent) came from the GoT, while US $1,033 million (74 percent) came from development partners. Are DPs still channeling their funds through the WSDP phase 2 or has this changed? If things have changed, how?
3. What are some of the key challenges that faced WSDP – phase 1, the lessons learned and what are the challenges, if any, currently facing WSDP – phase 2?

Specific Questions related to establishing current status and emerging issues in Tanzania's Water Sector – EWURA:

4. What challenges do you encounter in regulating the water sector in Tanzania? What can you say have been EWURA's success stories?
5. How do you ensure that water supply authorities you regulate take poor communities—informal settlements and peri-urban areas, rural areas—into consideration when delivering their services?
6. What challenges have you observed in the interactions between EWURA and the Basin Water Boards? How do the different organizations coordinate their different regulatory functions?

7. With establishment of RUWASA, will EWURA's mandate change in any way? If yes, how? If no why not?
8. Do you have any partnerships with DPs and NGOs? How do these partnerships support EWURA in delivering on its mandate?
9. What can you say are some of the critical institutional, financial, and infrastructure aspects constraining or enabling the actions of regulating water sector in Tanzania?
10. Do you think that EWURA already has sufficient capacity to manage all urban and rural water supply systems in Tanzania? Where do you see the capacity gaps, if any?
11. Do you think the private sector has a role to play in Tanzania's water sector? If yes, what and how?
12. Have there been any success stories of private sector engagement in water service provision in Tanzania? Do you see any opportunities for private sector partnerships in the sector?
13. What reforms/changes need to be done to attract more private sector participation in the sector?
14. Does EWURA also regulate private sector water service providers? Are there plans to regulate informal water service providers in Tanzania? Do you interact with them in any way?
15. What are your organizational arrangements for Monitoring, Evaluation, and Learning? How do you involve other GoT stakeholders as well as others outside the GoT in this process? What are the key success stories and lessons? What gaps do you see, if any?

Specific Questions related to establishing current status and emerging issues in Tanzania's Water Sector – RUWASA:

16. RUWASA is a new institution in the water sector; what will be your role?
17. What challenges do you foresee in undertaking your role? And what strategies do you have in place for addressing them?
18. Rural water points mapping by the GoT show a disturbing high failure rate and low functionality of most rural water systems; what do you see as the underlying causes of this?
19. What do you see as some of the most pressing priority issues in rural water services that RUWASA will need to focus on?
20. How will RUWASA coordinate and plan with EWURA, the COWSOs, Urban Water Authorities, and the District and Small Town Water Authorities? Do you foresee any conflicts of mandate?
21. How do you assess RUWASA's current capacity to manage all rural water supply systems in Tanzania? Are there any areas where you see gaps? Please explain.
22. Women suffer most when water systems fail. What do you see as some of the critical challenges around women's empowerment and inclusion or participation in water services in Tanzania?
23. What if any role do you see the private sector playing in rural water supply? Have there been any success stories of private sector engagement in water supply in Tanzania? What if any challenges do you see in private sector engagement in rural water supply?

24. What opportunities do you see for private sector partnerships in your work? What reforms/changes need to be done, if at all, to attract more private sector participation in water supply?
25. What are your organizational arrangements for Monitoring, Evaluation, and Learning? How do you plan to involve other GoT stakeholders as well as others outside the GoT in this process? Are there any gaps you see as requiring support?

Specific Questions related to establishing current status and emerging issues in Tanzania's Water Sector - URBAN WATER SUPPLY AND SANITATION AUTHORITIES:

26. With the water sector reforms creating new organizations such as RUWASA, has the role of UWSAs changed in any way? What will be the role of RUWASA vis a vis the role of the UWSAs?
27. There are reports of an ongoing clustering/aggregation process where the bigger UWSAs are required to take over management of villages and towns around your service areas, is that true? If yes, what informed that new strategy? If not, what is the correct version of the ongoing strategy?
28. Most research on water supply often indicate that poor neighborhoods pay more for water than non-poor neighborhoods. Is this the same case with your service areas? How do you intend to solve the price differentials between the poor and non-poor neighborhoods?
29. What do you see as some of the major strengths and weaknesses in the interactions, coordination and planning between the different GoT water sector institutions/organizations tasked with the delivery of WASH and WRM services to rural, urban, and peri-urban populations?
30. Does your authority subsidize water and sanitation services for the poor? If yes, what challenges have you observed in ensuring that subsidies are accurately targeted and reach their intended beneficiaries?
31. How do you assess your organization's current capacity to manage water supply systems in your area of jurisdiction? What are the three to five most pressing weaknesses or problems that your organization faces to providing sustainable services now and in the coming years?
32. Are there informal small-scale water providers in your area? Do you officially recognize or collaborate with them in any way? Why? (or Why not?).
33. Do you have any collaboration or partnership with NGOs, CBOs, or DPs in delivering your mandate? Describe those partnerships, if any.
34. What are your organizational arrangements for Monitoring, Evaluation, and Learning? How do you involve other GoT stakeholders as well as others outside the GoT in this process? What are the key success stories and lessons? What gaps do you see, if any, in how this mechanism could be improved?

Questions related to developing intervention levers to respond to challenges and opportunities for water sector improvement

35. Looking at the current water and sanitation services sector in Tanzania, which policies, programs, or opportunities do you think remain under-explored and if explored would best help Tanzania accelerate achievement of its WASH targets?
36. Considering the current water sector status, the opportunities you've mentioned, and the constraints still not addressed, which five priority areas should USAID focus its attention

and resources in the next five years in order to support the GoT in accelerating progress toward WASH-SDG goals in a sustainable manner?

37. Specifically, to your role in the sector, how would you recommend that USAID partners with and support you in delivering your mandate?

Thank you very much for taking your time to speak to us and answer our many questions. We appreciate it!

KEY INFORMANT INTERVIEW PROTOCOL – PRIVATE SECTOR ACTORS

<u>This Protocol is specifically designed to be applied for private sector actors in Tanzania's Water Sector</u>

Targeted Respondents for this protocol Include:

1. TIB Development Bank Ltd. *(because they are implementing a World Bank heavily involving private sector actors – "Accelerating solar water pumping via innovative financing model)*
2. E-water Pay Ltd.
3. SATO sanitation services
4. Unit Trust of Tanzania Microfinance Institution (UTT-MFI) – they did a project with E-water Pay in Babati District
5. Grundfos Tanzania
6. Davis and Shirtliff Tanzania
7. UMAWA
8. Transwater
9. Other smaller-scale water + sanitation services providers

Interview Questions

General Questions to all private sector actors (*e.g.*, D & S, Merry Water, *etc.*):

1. What interventions/projects and with which GoT partners/agencies are you currently involved in?
2. Considering the socio-political sentiments around water as a public good that should be provided by Government, what structure of partnerships with GoT agencies at Ministry/national level, UWASAs level, RUWASA level, District/LGA level would you be interested in?
3. Would you be interested in a partnership that goes beyond just being a contractor/supplier of inputs to a medium-term performance-based install and operate partnerships? What risks do you see in such kind of partnerships? How would you propose to address those risks with the aim of having bigger private sector role in water/sanitation?
4. From your experience thus far as a private water sector player in Tanzania, what have been the most important contributions, constraints, and opportunities for the private sector to play a more effective role in providing water, and sanitation services?

Specific Questions for TIB Development Bank Ltd:

1. The World Bank project for accelerating solar water pumping using innovative financing models, the private sector actors are expected to be given 5-year service contracts for O&M of clustered 25-50 villages. Have you had any discussions with interested private sector actors? Do you think there are enough private actors who would be interested in such a project?
2. How will they be paid? Will the COWSOs be able to collect enough funds to pay the private sector for their services under the contract? What happens if the funds are not enough?
3. What risks do you see that may affect this project?
4. Generally, what do you see as the most critical constraints to private sector participation in the water sector?

Specific Questions for E-water Pay Ltd:

1. You have implemented two projects, one in partnership with WARIDI project and the other in partnership with Water Aid in Babati district. How were these projects designed?
2. What are some of the critical enablers of success in all your projects in Tanzania?
3. What are some of the critical constraints and challenges you've faced as a private sector water actor in Tanzania?
4. Do you think there's sufficient enabling environment and government support for private sector participation in the water sector?

Specific Questions for other small-scale water + sanitation private sector players/enterprises: For both Fecal Sludge Management services (pit emptiers, *etc*.) and water supply services:

1. What is the current pit emptying practices in this area (mechanical and manual emptying, illegal nocturnal emptying, sludge discharge sites, difficulties encountered, *etc*.)?
2. What water supply services do the private sector offer (water kiosks, water bowsers, *etc*.)?
3. What prices do the providers charge for the different services?
4. In most places, informal private sector players have emerged as a result of the existence of a gap in service provision from public agencies, what challenges have you observed in your attempts to "fill the gap left by government agencies"?
5. Are your services standards and prices currently regulated by the government (*e.g*., by EWURA or by local district?) If yes, how? If no, Why?
6. How do you relate with GoT agencies in your business? Does the government support the services you provide or do they suppress your business? *Depending on the answer given – ask "How?"*
7. Would you want your services to be more formalized/recognized by the government agencies for example be licensed as an official service provider? How else would you like the government to support you?
8. What are the costs for your services? Do your customers have any difficulty affording these services? How do the costs of your services compare with the cost of government services?

All: Questions related to developing interventions and opportunities for water sector improvement

1. Considering the current water sector status, the opportunities you've seen, and the constraints still not addressed, what priority areas should USAID focus its attention and resources in the next five years in order to support the GoT in accelerating progress toward WASH-SDG goals in a sustainable manner?
2. Specifically, to your role as a private sector, how would you recommend that USAID partners with and support you towards developing the sector?

Thank you very much for taking your time to speak to us and answer our many questions. We appreciate it!

KEY INFORMANT INTERVIEW PROTOCOL – WARIDI

Interview Questions:

Questions related to WARIDI's current interventions in the water Sector:

1. What strategies are being employed in ongoing and planned efforts in WASH and water resources management by WARIDI, and where have they taken place?
2. How are women and youth being engaged in these interventions? What are their achievements or attributes and what are the bottlenecks/challenges and lessons learned?
3. How do you see your support evolving in the coming years as you partner with GoT towards achieving its SDGs and regional goals related to WRM and WASH?

Questions related to understanding water in Tanzania's development context

1. As WARIDI is supporting the wider Water Sector Development Program (2006-2025), what do you see as the progress of implementation of the WSDP? How do you gauge your contribution towards achieving the WSDP targets and SDGs? What have you seen as some of the successes and challenges?
2. From a natural resource base and water endowment perspective, what do you see as the key climate change and disaster risks that may affect the development of Tanzania's water sector over the long term?
3. Do you think the GoT is doing enough to address some of these risks? How so? What are your suggestions in strengthening the efforts to reduce the risks?

Questions related to establishing current status and emerging issues in Tanzania's Water Sector

4. From your experience in Tanzania, what do you see as some of the major strengths and weaknesses in the interactions, coordination and planning between the different GoT water sector institutions/organizations tasked with the delivery of WASH and WRM services to rural, urban, and peri-urban populations?
5. From your interactions with the different GoT water sector institutions/organizations at the national and local level; who do you see as the most relevant stakeholders in spearheading the WASH and WRM? How did you engage them? What are the success stories from the engagement? What do you see as challenges? What are your suggestions in addressing these challenges?
6. WARIDI has been involved in technical capacity building for WRM and WASH activities with the GoT? What was the nature of the involvement? Do you see any gaps? What areas need to be given priority?

7. From your organization's interactions with the GoT, what are some of the issues you've observed in terms of budget allocations, disbursements, and financing patterns for WASH/WRM? How does the financing mechanism differ from the approach used by WARIDI? What lessons can the GoT and other partners take from the model WARIDI has employed?
8. Out of the LGAs WARIDI has been working on, which ones can be taken as success stories? What were the factors for the success in the area? What are the challenges in the other areas?
9. WARIDI has been operating using sub-grantees (*e.g.*, CEMDO, MAMADO, SAWA, IECA, *etc*.) to implement WASH activities. What has been the successes in using this mode of operation? What have been the challenges? Do you see any gaps? Any suggestions?
10. From your interactions with the rural COWSO, what have you seen as key financing, governance and sustainability challenges? Have you interacted with the urban water service providers? What have you seen as key financing, governance, and sustainability challenges?
11. What are some of the strengths and constraints you've witnessed in improving access to sanitation especially for the urban poor and rural communities?
12. Are women or certain groups socially excluded from participation in decision-making and benefit sharing in the water sector and in which ways?
13. In terms of leveraging private sector participation in Tanzania's water sector, have there been any success stories? Do you think there's enabling environment and sufficient GoT prioritization of private sector involvement in the water sector? What opportunities are there for women and youth in private sector and entrepreneurial activities? What are the incentives for partnership with public sector supply? What policies, regulations, and strategies are in place to support/enable or hinder the private sector from participating/working in the water sector?
14. Now that RUWASA has come into effect while WARIDI is in operation, have there been any changes on how WARIDI is engaging with stakeholders? *(We take into consideration the engagement with the LGAs through DWEs and at the regional level, all the way up to the national level*). What changes, if any, and how?
15. Generally, within the spheres of urban water supply, rural water supply, access to sanitation, and water resources/basins management in Tanzania, what are the most salient issues WARIDI has been dealing with in the recent past?

Question related to developing intervention levers to respond to challenges and opportunities for water sector improvement

16. Considering the current water sector status and the salient issues you've seen emerging, which specific areas would you recommend USAID to focus their support for the GoT in accelerating progress toward WASH-SDG goals in a sustainable manner?

Thank you very much for taking your time to speak to us and answer our many questions. We appreciate it!

KEY INFORMANT INTERVIEW PROTOCOL – WARIDI SUB-GRANTEES – USAID PROJECT

Interview Questions

Questions related to subgrantee current interventions in the water sector:

1. What is your organization's current interventions in supporting WARIDI and Tanzania's water sector development? *(Feel free to ask any other further probing questions related to the organization's current projects in Tanzania.)* Where do you specifically work? Have you worked in other places in Tanzania? Where and in what activities?
2. How do you see your support evolving in the coming years towards achieving SDGs and regional goals related to WRM and WASH?

Questions related to understanding water in Tanzania's development context

1. As WARIDI is supporting the wider Water Sector Development Program (2006-2025), what do you see as the progress of implementation of the WSDP? In what ways?
2. What is the progress of implementation of the WSDP and what have you seen as some of its success stories as well as challenges?
3. Do you think the GoT is doing enough to address some of the challenges? How so?

Questions related to establishing current status and emerging issues in Tanzania's water sector

4. From your experience working in the area <Name of the LGA>, do you have any interactions, coordination and engagement with different GoT water sector institutions/organizations tasked with the delivery of WRM and WASH services to rural, urban, and peri-urban populations? Can you please describe the nature of your interaction with these organizations?
5. Working as a WARIDI subgrantee in the WASH sector, what do you think has been your contribution to the WASH and WRM services in the area? What are the reasons for the success?
6. What do you see as some of the major strengths and weaknesses in the interactions, coordination, and engagement with the GoT institutions/organizations?
7. Has <Name of Partner/Org> been involved in technical capacity building for WRM or WASH services with the COWSOs and other WASH-related activities implementers? What was the nature of the involvement? Do you see any gaps?
8. From your organization's interactions with the GoT at the local level, what are some of the issues you've observed in terms of budget allocations, disbursements, and financing patterns for WASH/WRM?
9. What have you seen as key financing, governance, and sustainability challenges for the COWSOs?
10. What are some of the strengths and constraints you've witnessed in improving access to sanitation especially for the urban poor (in case of peri-urban involvement) and rural communities?
11. Are women or certain groups socially excluded from participation in decision-making and benefit sharing in the water sector and in which ways?
12. In terms of leveraging private sector participation in Tanzania's WASH sector, have there been any success stories? Do you think there's enabling environment and sufficient GoT prioritization of private sector involvement in the WASH sector?

13. Generally, within the spheres of urban water supply, rural water supply, access to sanitation, and water resources/basins management in Tanzania, what are the most salient issues <Name of Partner/Org> has been dealing with in the recent past?
14. From your experience in working in the area and other places in Tanzania, what do you think are the key enabling factors and risks in sustaining water supply, resource management, and WASH services? How can GOT plan, finance, and manage water supply, resources, and WASH for the long term?

Question related to developing intervention levers to respond to challenges and opportunities for water sector improvement

15. Considering the current water sector status and the salient issues you've seen emerging, which specific areas would you recommend USAID to focus their support for the GoT in accelerating progress toward WASH-SDG goals in a sustainable manner?

Thank you very much for taking your time to speak to us and answer our many questions. We appreciate it!

KEY INFORMANT INTERVIEW PROTOCOL – USAID STAFF TEAM

(Local Mission + Washington water office)

Interview Questions

1. USAID's global water/sanitation strategy is focused on five areas: 1) governance + finance; 2) sanitation and hygiene, 3) safe drinking water, 4) water resource management, 5) gender equality and empowerment. Component 2 of WARIDI had some focus on WRM. Are WRM-targeted interventions something you are looking to scale up basin-wide or nationally in future interventions?
2. What are your thoughts on the extent of ongoing collaboration with the GoT during the WARIDI project? Would you like to see more collaboration with GoT agencies in planning and/or implementation of USAID water projects moving forward?
3. In other countries, *e.g.*, Lebanon, USAID has designed projects for Government staff capacity building such as training utility operators, plumbers, lab technicians through a water operators certification program. What if any capacity building and systems strengthening of GoT utility companies or other water supply staff is envisioned for future programming? Would USAID want to work directly with the UWASAs and RUWASA? What kind of partnership aimed at building their capacity would you prioritize? What about capacity building with service providers such as WASAs for improving the quality of water and sanitation services?
4. What funding models do you plan to use for WASH, sanitation, and WRM in Tanzania. On strengthening WASH governance and financing goal in USAID's WASH strategy, USAID seeks to drive deployment of innovative financing instruments including expanding room for commercial finance. What if any current or planned efforts are there to support the NWF?
5. What is USAID's strategy and partnership approach towards enhancing private-sector involvement in sanitation markets rather than subsiding products? Is USAID Tanzania keen on contextualizing lessons from Whave Ltd. in Uganda, FundiFix in Kenya, UDUMA in Mali, WASHFIN private finance models, *etc.*?

6. What kind of community engagement do you see being important for water supply, management, and WASH at the grassroots level? Have any lessons been learned from WARIDI or other experiences in the region which could be useful in the next strategy?
7. Apart from the more formalized private sector players—the hardware's/suppliers or shop outlets—most water private market actors emerge informally to fill in a public service vacuum. What if any plans are there for USAID to assist the regulation of informal markets? Is it USAID's strategy to partner only with the formal players or do you also have a scope towards working with the informal private actors towards formalizing their operations?
8. The USAID Water and Development Alliance (WADA) project in partnership with Coca-Cola seeks to work with entrepreneurs to install and manage for 3 years solar water powered systems. The locations include Dodoma, Singida, Tabora, *etc*. World Bank is also implementing a similar solar-powered system acceleration project in the same area, does USAID collaborate with the WB? Why did USAID opt not to be part of the WSDP basket fund?
9. How strong do you see the DPG partnership and collaboration between different DPs? What kind of questions would you want us to ask the other DPs related to this?
10. The WARIDI project focused on the Rufiji and Wami-ruvu basins, is there an interest to expand scope beyond those specific geographical areas? The Kigoma region has been extensively cited as underserved, is it an area USAID is keen on expanding their support to?
11. What has been the scale of USAID's involvement in social accountability, citizen voice, and community water governance-related programming and how do you see that evolving? Is it an area you want to do more in? *Shahidi wa maji, etc*.
12. What's the Mission's appetite/interest in working on national-level Institutional, Policy, and Regulatory (IPR) Incentives to Improve WSS Services? Or would you prefer to concentrate much of your support at sub-national level (LGA) and community-level?
13. For the Washington staff in the room: What practices or models in the region or in cases from other countries could be considered for the Tanzanian water context?

Thank you very much for taking your time to speak to us and answer our many questions. We appreciate it!

ANNEX 4: LIST OF KEY INFORMANTS INTERVIEWED

#	Name(s) of Interviewee(s)	Organization
1	Lukas Kwezi	DFID
2	Akiko Ito, Apolei Rosina	Japanese International Cooperation Ageny (JICA)
3	Christian Henschel	GIZ
4	Dr. Ibrahim Kabole	Water Aid
5	Francis Mtitu, Elizabeth Jordan, Seema Johnson	USAID
6	Rowland Titus, Yo Miura	UNICEF
7	Gertrude Lyatuu	UNDP
8	Iain Menzies	World Bank
9	Dr. Hildebrand Shayo, Frederick Ihembe, Kenneth Lusesa, Flora Namusobi, Anderita Kigube	TIB Development Bank
10	Eng. Warioba Sanya	RUWASA
11	Cyprian Luhemeja	DAWASA
12	Exavery Makwi, Obed P. Warikoi, Musa T. Lwila	CRDB Bank
13	Mr. Meck Manyama, Eng. Stanley William, Patrick Kiheche	MWAUWASA
14	Hassan Karambi	Tanzania Chamber of Commerce, Industry and Agriculture
15	Jane J. Mrosso, Renatus Shinhu, Mangasa Ogoma	Lake Victoria Basin Water Board
16	Mike Mayhew	E-water Pay Ltd.
17	Mathias Millinga	Usalama wa Watu na Mazingira (UMAWA)
18	Moses Senyagwa	Trans Africa Water
19	Hudson Nkotagu	National Water Board
20	Duncan Rhind	SNV
21	Happiness Maruchu	TGNP Mtandao
22	Gilbert Mwangola	Grundfos
23	Daniel Nickel	ATAWAS
24	Emmanuel Jackson	TAWASANET
25	Andrea Hoeltke	KfW
26	Katell Rivolet	AFD
27	Benjamin Munyao, Johnson Mugomba, Rosemary Jerome, Felister Assenga	Davis & Shirtliff
28	Roland Moos, Mr. Damian Massenge	Merry Water
29	Louis Accaro	Tanzania Private Sector Foundation (TPSF)
30	Adam Karia	Water Institute
31	Ally Mwinchande, Massimo Bonannini	EU
32	Ngitoria, Joyce Kyando, Beatrice	E-MAC
33	Eng. Idris Msuya	Rufiji Basin
34	Justine Mwambeki	MoEST
35	Abas Mussa, Eng. Neema Mugenda	MoW-Sanitation &Sewarage
36	Anyitike Mwakitalima	MoH-Sanitation
37	Mr. Alex Tarimo	MoW-DPP-Private Sector

#	Name(s) of Interviewee(s)	Organization
38	Eng. Mbiru, Eng.Ngowi, Eng. Nicodem, Eng. Nicholaus, Warioba, Eng. Bernard Bwire, Martin Knyamala, Eng. Luka, Revocatus Victor, Daud Mshana, Joyce Elly, Alex Subira, Festo Mkoma, Lilian Mmari, Eneriatha Muhesi, Eng. Bertam Minde, Agapiti Joseph.	Morogoro Urban Water Authority
39	Ezekiel Simwanza, Gaston Gration, Fanuel	MAJI NA MAENDELEO DODOMA (MAMADO)
40	Eng. Shaban Jellan	RUWASA
41	Remijuas Mazigwa, Gabriel	MoW-Policy & Planning
42	Godfrey Mbabaye, Anna Mwahelende	RUWASA-Dodoma
43	Dr. George Lugomela	MoW-Water Resource
44	Japhet Mwasanyamba, Joseph, Yulian, Mbaga	WAMI-RUVU Basin Board
45	Gilbert Kayange, Steven Mwasaka, Philbert Mbatia, Amina Mwinyi, Eng. Fabian Maganya, Restituta Sakila, Yahya Kamba, Jessica Mwalyoyo, Mark Lasco, Edwin Hyera.	Iringa Urban Water Authority
46	Erasto Ndunguru, Ritha Bigambo, Ahmed Chuma, Hadji	National Water Fund
47	Eng. Nadhifa Kemikimba	MoW-Water Supply Directorate
48	Dorisia Mlashani	MoW-Coordination & Design
49	Eng. Clement Kivegalo, Eng. Bwire	RUWASA
50	Eng. Exaudi Fatael	EWURA

ANNEX 5: KEY TANZANIA WATER SECTOR LEGISLATIONS, POLICIES, AND STRATEGIES

Key Legislation, Policy or Strategy	Primary Responsibility	Salient Features to Note With Reference to Water Services Delivery
National Water Policy 2002	MoW	The policy highlights the need to integrate water supply, sanitation, and hygiene interventions. The policy emphasizes that sufficient supply of water and adequate means of sanitation are provided for by the GoT as basic human needs. The most salient objective of the Policy is *"to create an enabling environment and appropriate incentives for the delivery of reliable, sustainable and affordable urban and rural water supply and sewerage services as well as integrated water resources management."*
Water Supply and Sanitation Act 2019	MoW	The Act provides the legal framework and defines the institutions responsible for management of water and sanitation services in Tanzania. It outlines the responsibilities of government authorities involved in the water sector in both urban and rural areas. It states the obligations of Urban water supply and sanitation authorities and a new Authority—Rural Water & Sanitation Authority RUWASA—responsible for providing water supply and sanitation services in rural areas defining their functions, powers, and duties. Section 32 of the Act also provides for the establishment of CBWSOs for the purposes of operating and maintaining rural water schemes. The Act provides that a CBWSO can be either a Water Consumer Association, a Water Trust, a Cooperative Society, a NGO, a Company; or any other body as approved by the Minister. The Act provides that the CBWSO will manage rural water schemes on the delegated Authority of RUWASA and thus the CBWSO must submit a Constitution or Memorandum of Agreement to RUWASA and to their LGAs. The Act defines the funding mechanism for water and sanitations services including establishment of a Water Investment Fund. The act additionally outlines the penal code related to the use of water and a range of penalties, some more severe than others for polluting, or unlawful use of water resources.
Water Resources Management Act 2009	MoW	This act provides the institutional and legal framework for the sustainable management and development of water resources. Specifically, it outlines the principles for water resources management, and prevention and control of water pollution. The act prohibits discharge of waste into any waterbody including ground water without written permit in addition to defining guidelines and standards for the construction and maintenance of water resources structures, and the issuance and operation of water permits and registration of boreholes.
Environmental Management Act 2004	Ministry of State in the Vice-President's Office (Union and Environment)	The Act states that protection and management of water sources including rivers and lakes as well as water reservoirs is a responsibility of the LGAs responsible for the environmental matters. They shall issue the guidelines prescribe measures for environmental protection of water sources. The Act also mandates the LGAs to prescribe and issue guidelines, for onsite disposal, transportation, and treatment of liquid waste from both domestic and industrial origins.
Public Health Act 2009	MoHCDGEC	This act emphasizes a number of issues that are of public concern, including sanitation and hygiene. The act prohibits discharge of wastewater without following national standards and laws. It emphasizes that all public buildings are to be equipped with sufficient sanitary facilities.

Key Legislation, Policy or Strategy	Primary Responsibility	Salient Features to Note With Reference to Water Services Delivery
Energy and Water Utilities Regulatory Authority (EWURA) Act 2001	Ministry of Energy & MoW	The Act establishes a regulatory agency—EWURA—whose general function is to regulate the provision of energy services, water supply, and sanitation services by a water authority or other persons. This includes the establishment of standards related to equipment and approval of tariffs chargeable for the provision of water supply and sanitation services.
National Water Sector Development Strategy 2006-2015	MoW	The strategy sets out a mechanism for implementing the National Water Policy 2002, which aims to achieve sustainable development in the sector through an *"efficient use of water resources and efforts to increase the availability of water and sanitation services."*
The National Environmental Health, Hygiene and Sanitation Strategy 2008-2017	MoHCDGEC	This strategy's overall goal is to improve the status of environmental health in Tanzania by focusing on providing equitable and affordable environmental health, sanitation and hygiene services to all Tanzanians. Wastewater management has been emphasized as a priority area to be addressed.

ANNEX 6: DETAILS OF SOME MAJOR ONGOING AND FUTURE PLANNED DONOR PROJECTS:

Interventions Focus	
Project Name	WORLD BANK Sustainable Rural Water Supply and Sanitation Program **2019-2024** US $350 million
Urban Water Supply	-
Rural Water Supply	**US $105 million**: Support 86 Districts attain sustained access to improved water services in rural areas by: a) investing in soundly designed and properly constructed water schemes; b) rehabilitating and repairing non-functional water points; and c) monitoring and conducting maintenance activities on existing water schemes to ensure they remain functional: GoT will receive US $25 per person who has gained access to an improved water supply system; GoT will receive US $164 for each sustainably Functioning Water Point
Urban Sanitation	-
Rural Sanitation	**US $75 million**: Promoting increased access to improved sanitation services in rural areas by: a) rehabilitating and constructing sanitation and hygiene facilities in rural health centers and public schools: 1) GoT to receive US $5 per person who has gained access to an Improved Sanitation Facility; 2) US $20,000 for each school gained access to an Improved Sanitation and Hygiene Facilities; 3) US $16,000 per new community achieving Community Wide Sanitation Status
Hygiene Promotion	Carrying out activities which promote and facilitate the upgrading and improvement of household sanitation and hygiene facilities; and providing support to villages to enable them to reach Community-Wide Sanitation Status.
WRM	-
Institutions/ Systems Strengthening	Strengthening the capacity of sector institutions to sustain service delivery in rural areas including: a) providing incentives to the participating Districts to improve the operation and maintenance of water supply by registering COWSOs for existing schemes; b) supporting the establishment and operationalization of GoTs new delivery model for the rural water sector, by providing incentives to RUWASA to work with LGAs and COWSOs to facilitate establishment of a mechanism for the management, operation, and maintenance of rural water supply schemes; and c) providing training to staff to improve the quality of service delivery
Project Location	17 Regions Tabora, Katavi, Rukwa, Lindi, Geita, Shingyanga, Singida, Kagera, Mwanza, Manyara, Mtwara, Simiyu, Iringa, Mara, Ruvuma, Kigoma, Songwe
Project Name	WORLD BANK: Second Water Sector Support Project 2017-2022 US $230 million
Urban Water Supply	1) US $57 million for Expansion of Water Supply Distribution in Unserved Priority Areas and Off-grid locations in Dar es Salaam City. Install 1,426 km of pipes, 42 kiosks, and 214 stand posts to benefit 453,000 people; 2) US $20 million to support DAWASA design and implement a Performance-Based NRW Reduction contract

Interventions Focus	
Rural Water Supply	X
Urban Sanitation	1) US $67 million for a modern DAWASA Wastewater Treatment and Sewerage plant at Mbezi with capacity of 11,000 CM per day; 2) US $17 million for Off-Grid Sanitation-safe emptying and transportation of the waste to a treatment facility, and treatment and safe disposal of the waste into the environment
Rural Sanitation	X
Hygiene Promotion	X
WRM	US $50 million for integrated water resources management focused on strengthening the institutions to more adequately deliver on their mandates (support financial sustainability, capacity enhancement, performance management, and cross-sectoral collaboration, setup a Water Resources Center of Excellence and develop IWRM, catchment conservation through WUAs for Wami-Ruvu Basin; Finance Hydrometeorological equipment and Data collection system to collect, store, analyze, and disseminate credible data and information on water resources
Institutions/ Systems Strengthening	US $10 million for DAWASA Institutional Restructuring/Reform and Utility Modernization
Project Location	Dar es Salaam City
Project Name	Accelerating Solar Water Pumping Via Innovative Financing Project – Phase 1 US $48.5 million
Urban Water Supply	X
Rural Water Supply	Supply, Installation and Maintenance of 280 Solar-PV Pumping Systems. A private sector contractor will be selected to Install and Operate the systems for 5 years under a Service Contract. The project is designed such that World Bank provides 60% of the cost, 38.5% is a loan to COBWSOs from TIB Development Bank Ltd and 1.5% is a contribution from COBWSOs.
Urban Sanitation	X
Rural Sanitation	X
Hygiene Promotion	X
WRM	-
Institutions/ Systems Strengthening	Capacity building including support in community engagement, sensitization/training of participating COWSOs, and general project technical support and assistance
Project Location	12 Regions – Dodoma, Singida, Morogoro, Geita, Kagera, Mara, Shinyanga, Mtwara, Rukwa, Arusha, Manyara
Project Name	WORLD BANK: Water Security for Growth **- Project under preparation, not yet implemented** US $350 million

Interventions Focus	
Urban Water Supply	Proposed Component 1: US $185 million – Infrastructure for climate-resilient bulk water supply for competitive, industrializing cities - 1) innovative infrastructure to secure bulk-water supply for Dodoma, 2) demand management, water source development for use during drought, and other measures to augment supply during extended drought anticipating Dodoma, Dar es Salaam, and Arusha
Rural Water Supply	X
Urban Sanitation	X
Rural Sanitation	X
Hygiene Promotion	X
WRM	Proposed Component 2: US $135 million – Transform livelihoods and protect water sources for cities and industries: support actions that protect and restore watersheds to enable sustainable ecosystem services availability, reduce erosion, and increase overall water availability in prioritized areas; Support Agricultural water management and climate-smart agriculture to improve crop yields and improve resilient water use by small and medium-scale farmers in selected basins
Institutions/ Systems Strengthening	Valuing water and incentivizing efficiency – Support MoW for increasing transparency regarding water allocation and uses, piloting adaptive allocation permits, adjusting current bulk water pricing, and enhancing MoW's technical skills for local and basin level monitoring and oversight
Project Location	TBD
Project Name	AFRICAN DEVELOPMENT BANK: Arusha Sustainable Urban Water and Sanitation Delivery Project 2015-2019 US $234 million
Urban Water Supply	Increasing water production capacity from 40,000 CM/d to 109,000 CM/d through Construction of 3 new conventional water treatment plants (33,000 CM/d); Rehabilitating and expanding the transmission and distribution network (about 355 km) to improve water supply coverage from 44% to 100%; Construction of 17 water storage tanks (19,045 CM); Construction of a new water quality and testing laboratory for Arusha City
Rural Water Supply	X
Urban Sanitation	Rehabilitating and expanding the sewerage network and sewerage treatment facilities in Arusha city; Support decentralized sanitation systems including sanitation marketing for on-site sanitation technologies
Rural Sanitation	X
Hygiene Promotion	X
WRM	-

Interventions Focus	
Institutions/ Systems Strengthening	Enhance Arusha Urban Water and Sanitation Authority (AruWASA) institutional capacity for services delivery including Institutional and organizational review study, Training and capacity building of AUWSA staff, Support to AUWSA Corporate Social Responsibility Program (CSR), Support to AUWSA to adopt and implement the national gender strategy, undertaking a Tariff and affordability study and awareness, Supply of Project equipment; construction of new office building
Project Location	Arusha City
Project Name	**KfW:** 7 Towns Urban Upgrading Program Approved in 2018 US $90 million
Urban Water Supply	Major improvements in the water infrastructure for urban towns
Rural Water Supply	-
Urban Sanitation	Major improvements in sanitation infrastructure for urban towns
Rural Sanitation	-
Hygiene Promotion	-
WRM	-
Institutions/ Systems Strengthening	Providing capacity building/technical assistance through GIZ to the utilities on operational improvements and institutional strengthening
Project Location	Kigoma, Sumbawanga, Lindi, Babati, Mtwara, Bukoba, Musoma
Project Name	**KfW:** Simiyu region Climate Resilient Development Programme US $190 million
Urban Water Supply	Construct a 100 km pipeline to channel water from Lake Victoria to the Simiyu region where drinking water is in short supply due to climate change; Extend water supply pipelines to villages within 12 km radius of the pipeline
Rural Water Supply	
Urban Sanitation	-
Rural Sanitation	-
Hygiene Promotion	-
WRM	-
Institutions/ Systems Strengthening	-
Project Location	Simiyu region
Project Name	**KfW:** Investments Financing Facility Output Based Aid project ongoing US $135 million

Interventions Focus	
Urban Water Supply	Facilitate urban water authorities to Mobilize additional financial resources from commercial bank loans for extending water supply infrastructure The utilities take 100% loans to finance the projects then KfW offsets 50% of the investment upon achievement of results
Rural Water Supply	-
Urban Sanitation	-
Rural Sanitation	-
Hygiene Promotion	-
WRM	-
Institutions/ Systems Strengthening	-
Project Location	Moshi,Mwanza, Tabora, Kahama, Shinyanga, Iringa, Tanga, Songea
Project Name	**AFD – FRENCH:** LAKE VICTORIA WATER AND SANITATION PROJECT (LVWATSAN) -MWANZA **Jointly funded by European Investment Bank** **2014-2019** US $127
Urban Water Supply	Upgrading and extension of water facilities in the cities of Mwanza, Musoma, and Bukoba and other satellite towns of Mwanza, located on the shores of Lake Victoria
Rural Water Supply	X
Urban Sanitation	Upgrading and extension of sanitation facilities form informal settlements of Kilimahewa, Mabatini and Igogo access to sanitation through the simplified sewerage system
Rural Sanitation	X
Hygiene Promotion	X
WRM	X
Institutions/ Systems Strengthening	X
Project Location	Mwanza, Musoma, and Bukoba: Misungwi, Magu, and Lamadi
Project Name	**AFD – FRENCH:** PROJECT under scoping/preparation: Improvement of sanitation and reduction of non-revenue water project for the southern neighborhoods of Dar es Salaam
Urban Water Supply	Reduction of Non-Revenue Water in Dar
Rural Water Supply	X
Urban Sanitation	Improvement of Sanitation in Dar
Rural Sanitation	X

Interventions Focus	
Hygiene Promotion	X
WRM	X
Institutions/ Systems Strengthening	X
Project Location	Dar es Salaam
Project Name	**AFD – FRENCH:** PROJECT UNDER identification: Water supply and sanitation project in Shinyanga
Urban Water Supply	Improvement of urban water supply in Shinyanga
Rural Water Supply	-
Urban Sanitation	Improvement of urban Sanitation services Shinyanga
Rural Sanitation	-
Hygiene Promotion	-
WRM	-
Institutions/ Systems Strengthening	-
Project Location	Shinyanga
Project Name	**AFD –FRENCH:** Dar es Salaam sewerage improvement project
Urban Water Supply	-
Rural Water Supply	-
Urban Sanitation	construction of new wastewater treatment plan at Temeke and expansion of sewer lines
Rural Sanitation	-
Hygiene Promotion	-
WRM	-
Institutions/ Systems Strengthening	-
Project Location	Dar es Salaam
Project Name	**EUROPEAN UNION:** LAKE VICTORIA WATER AND SANITATION PROJECT (LVWATSAN) -MWANZA **European Investment Bank co-financed by French AFD and UN Habitat** US $127 million
Urban Water Supply	Upgrading and extension of water facilities in the cities of Mwanza, Musoma, and Bukoba and other satellite towns of Mwanza, located on the shores of Lake Victoria

Interventions Focus	
Rural Water Supply	x
Urban Sanitation	Upgrading and extension of sanitation facilities form informal settlements of Kilimahewa, Mabatini, and Igogo access to sanitation through the simplified sewerage system
Rural Sanitation	X
Hygiene Promotion	X
WRM	X
Institutions/ Systems Strengthening	X
Project Location	Mwanza, Musoma, and Bukoba: Misungwi, Magu, and Lamadi
Project Name	**USAID:** Tanzania Water Resources Integration Development Initiative (WARIDI) 2016-2020 US $48 million
Urban Water Supply	X
Rural Water Supply	Build and repair water infrastructure across 16 schemes, which will provide over 400 water distribution point
Urban Sanitation	X
Rural Sanitation	SBCC, CLTS for increased use of sanitation services and handwashing
Hygiene Promotion	
WRM	Supporting governance for sustainable and resilient management of water resources and services under a changing climate
Institutions/ Systems Strengthening	Training and capacity building of COWSOs for sustainable management
Project Location	5 districts: Kilombero, Mvomero, Kilosa, Kilolo, and Iringa
Project Name	**SNV:** Sustainable Sanitation & Hygiene for All Results program
Urban Water Supply	X
Rural Water Supply	X
Urban Sanitation	X
Rural Sanitation	Strengthening access to and sustained use of sanitation facilities; hygienic use and maintenance of sanitation facilities; and access to handwashing with soap for rural households
Hygiene Promotion	
WRM	X
Institutions/ Systems Strengthening	X

Interventions Focus	
Project Location	5 districts: Chato, Geita and Kwimba (in the Lake Zone) and Karatu and Babati (in the Northern Zone)
Project Name	**SNV:** WASH SDG Program 2017-2022 US $4.8 million
Urban Water Supply	X
Rural Water Supply	X
Urban Sanitation	Focused on Improving local treatment, disposal, and reuse options and scaling up a city-wide service delivery framework for urban areas
Rural Sanitation	X
Hygiene Promotion	X
WRM	X
Institutions/ Systems Strengthening	Build capacities and systems for the sustainable and full-cost recovery of city-wide sanitation services, supported by smart financing and investments
Project Location	Arusha and Shinyanga Regions
Project Name	**UK – DFID:** Support to Rural Water Supply, Sanitation & Hygiene in Tanzania 2-14-2022 US $150 million
Urban Water Supply	X
Rural Water Supply	1) **£62.6 million** channeled directly to the WSDP Basket Fund for construction and rehabilitation of water points as well as scaling up the implementation of the national sanitation and hygiene campaigns; 2) **£71.4 million** through PbR scheme to provide additional incentives to LGAs incentivize a focus on maintenance of rural water supply infrastructures
Urban Sanitation	X
Rural Sanitation	-
Hygiene Promotion	**£11.95 million** for the National Sanitation and Hygiene Behavior Change Campaign to support design and delivery of national sanitation campaign (contracted to London School of Hygiene and Tropical Medicine), improve data quality, monitoring, and reporting systems
WRM	-
Institutions/ Systems Strengthening	**£2.250 million** for technical assistance to improve institutional delivery capabilities in strategic program management and analytical capacity at the national and sub-national levels
Project Location	Lindi Rural, Ruangwa, Liwale,Nachingwea,Tandahimba, Newala, and Masasi

Interventions Focus	
Project Name	**KOICA -KOREA:** Construction of a new sewerage system network, a modern wastewater treatment plant and pumping station in Dar es Salaam US $110 million
Urban Water Supply	X
Rural Water Supply	X
Urban Sanitation	Construction of new sewerage treatment plant
Rural Sanitation	X
Hygiene Promotion	X
WRM	X
Institutions/ Systems Strengthening	X
Project Location	Dar es Salaam
Project Name	**BELGIUM:** Water and Sanitation Kigoma Region Project (WaSKiRP) 2017-2023 US $8.8 million
Urban Water Supply	X
Rural Water Supply	Rehabilitation and extension of existing water supply systems in Kigoma region including construction of intakes, pumping stations, treatment systems, reservoirs, distribution lines, domestic points, *etc*.
Urban Sanitation	X
Rural Sanitation	X
Hygiene Promotion	Hygiene promotion knowledge, attitudes, and practices (KAP) study and promotion campaigns
WRM	Water catchment protection and management including anti-erosion measures, water users associations capacity building, *etc*.
Institutions/ Systems Strengthening	Capacity development for sustainable management including a COWSO capacity assessment study and undertaking targeted capacity building measures based on gaps
Project Location	26 villages spread within Uvinza (3), Kakonko (8), Kibondo (1), Kasulu (4), Buhigwe (3) and Kigoma (7) Districts
Project Name	**GIZ:** Water security and climate resilience in urban areas in Tanzania US $6.6 million
Urban Water Supply	Improvement of water supply and infrastructure in underserved urban areas through private sector involvement, and coordinated town and investment planning
Rural Water Supply	-

Interventions Focus	
Urban Sanitation	-
Rural Sanitation	-
Hygiene Promotion	-
WRM	Climate-resilient WRM including adaptation measures through multi-stakeholder involvement and climate-resilient water safety plans for WSSAs
Institutions/ Systems Strengthening	Enhancement of the skills and capacities of technicians/artisans, especially female, in the water sector
Project Location	Songea, Tunduma, Mbeya, Shinyanga, and Korogwe

ANNEX 7: CONFLICT OF INTEREST DISCLOSURE FORMS

Name	Richard Noth
Title	Independent Consultant – WASH expert
Organization	NORC at the University of Chicago (Data for Development)
Assessment Position	Team Member
Evaluation Award Number *(contract or another instrument)*	AID-OAA-I-15-00024/AID-621-TO-17-00005
USAID Project(s) Assessed *(Include project name(s), implementer name(s) and award number(s), if applicable)*	USAID – Water Sector Assessment
I have real or potential conflicts of interest to disclose.	No
If yes answered above, I disclose the following facts: *Real or potential conflicts of interest may include, but are not limited to:* *1. Close family member who is an employee of the USAID operating unit managing the project(s) being evaluated or the implementing organization(s) whose project(s) are being evaluated.* *2. Financial interest that is direct, or is significant though indirect, in the implementing organization(s) whose projects are being evaluated or in the outcome of the evaluation.* *3. Current or previous direct or significant though indirect experience with the project(s) being evaluated, including involvement in the project design or previous iterations of the project.* *4. Current or previous work experience or seeking employment with the USAID operating unit managing the evaluation or the implementing organization(s) whose project(s) are being evaluated.* *5. Current or previous work experience with an organization that may be seen as an industry competitor with the implementing organization(s) whose project(s) are being evaluated.* *6. Preconceived ideas toward individuals, groups, organizations, or objectives of the particular projects and organizations being evaluated that could bias the evaluation.*	--

I certify (1) that I have completed this disclosure form fully and to the best of my ability and (2) that I will update this disclosure form promptly if relevant circumstances change. If I gain access to proprietary information of other companies, then I agree to protect their information from unauthorized use or disclosure for as long as it remains proprietary and refrain from using the information for any purpose other than that for which it was furnished.

Signature	
Date	November 01, 2019

Name	Winfred Mbungu
Title	Researcher – Country Water Expert
Organization	NORC at the University of Chicago (Data for Development)
Assessment Position	Team Member
Evaluation Award Number *(contract or another instrument)*	AID-OAA-I-15-00024/AID-621-TO-17-00005
USAID Project(s) Assessed *(Include project name(s), implementer name(s) and award number(s), if applicable)*	USAID – Water Sector Assessment
I have real or potential conflicts of interest to disclose.	No
If yes answered above, I disclose the following facts: *Real or potential conflicts of interest may include, but are not limited to:* *1. Close family member who is an employee of the USAID operating unit managing the project(s) being evaluated or the implementing organization(s) whose project(s) are being evaluated.* *2. Financial interest that is direct, or is significant though indirect, in the implementing organization(s) whose projects are being evaluated or in the outcome of the evaluation.* *3. Current or previous direct or significant though indirect experience with the project(s) being evaluated, including involvement in the project design or previous iterations of the project.* *4. Current or previous work experience or seeking employment with the USAID operating unit managing the evaluation or the implementing organization(s) whose project(s) are being evaluated.* *5. Current or previous work experience with an organization that may be seen as an industry competitor with the implementing organization(s) whose project(s) are being evaluated.* *6. Preconceived ideas toward individuals, groups, organizations, or objectives of the particular projects and organizations being evaluated that could bias the evaluation.*	--

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Signature	
Date	November 04, 2019

Name	Jacob Laden
Title	Evaluation Advisor
Organization	NORC at the University of Chicago (Data for Development)
Assessment Position	Evaluation Advisor
Evaluation Award Number *(contract or another instrument)*	AID-OAA-1-1 5-00024/AID-621 -T0-17-00005
USAID Project(s) Assessed *(Include project name(s), implementer name(s) and award number(s),* if *applicable)*	USAI D -Water Sector Assessment
I have real or potential conflicts of interest to disclose.	No
If yes answered above, I disclose the following facts: *Real or potential conflicts* of *interest may include, but are not limited to:* *I. Close family member who is an employee of the USAI D operating unit managing the project(s) being evaluated or the implementing organization(s) whose project(s) are being evaluated.* *2. Financial interest that is direct, or is significant though indirect, in the implementing organization(s) whose projects are being evaluated or in the outcome of the evaluation.* *3. Current or previous direct or significant though indirect experience with the project(s) being evaluated, including involvement in the project design or previous iterations of the project* *4. Current or previous work experience or seeking employment with the USAID operating unit managing the evaluation or the implementing organization(s) whose project(s) are being evaluated.* *5. Current or previous work experience with an organization that may be seen as an industry competitor with the implementing organization(s) whose project(s) ore being evaluated.* 6. *Preconceived ideas toward individuals, groups, organizations, or objectives of the particular projects and organizations being evaluated that could bias the evaluation.*	--

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Signature	
Date	October 30, 2019

Name	Bahati Tenga
Title	Evaluation Specialist
Organization	NORC at the University of Chicago (Data for Development)
Assessment Position	Team Member
Evaluation Award Number *(contract or another instrument)*	AID-OAA-I-15-00024/AID-621-TO-17-00005
USAID Project(s) Assessed *(Include project name(s), implementer name(s) and award number(s), if applicable)*	USAID – Water Sector Assessment
I have real or potential conflicts of interest to disclose.	No
If yes answered above, I disclose the following facts: *Real or potential conflicts of interest may include, but are not limited to:* *1. Close family member who is an employee of the USAID operating unit managing the project(s) being evaluated or the implementing organization(s) whose project(s) are being evaluated.* *2. Financial interest that is direct, or is significant though indirect, in the implementing organization(s) whose projects are being evaluated or in the outcome of the evaluation.* *3. Current or previous direct or significant though indirect experience with the project(s) being evaluated, including involvement in the project design or previous iterations of the project.* *4. Current or previous work experience or seeking employment with the USAID operating unit managing the evaluation or the implementing organization(s) whose project(s) are being evaluated.* *5. Current or previous work experience with an organization that may be seen as an industry competitor with the implementing organization(s) whose project(s) are being evaluated.* *6. Preconceived ideas toward individuals, groups, organizations, or objectives of the particular projects and organizations being evaluated that could bias the evaluation.*	--

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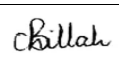
Signature	
Date	October 31st, 2019

Name	Rose Aiko
Title	Survey Specialist
Organization	NORC at the University of Chicago (Data for Development)
Assessment Position	Team Member
Evaluation Award Number *(contract or another instrument)*	AID-OAA-I-15-00024/AID-621-TO-17-00005
USAID Project(s) Assessed *(Include project name(s), implementer name(s) and award number(s), if applicable)*	USAID – Water Sector Assessment
I have real or potential conflicts of interest to disclose.	**No**
If yes answered above, I disclose the following facts: *Real or potential conflicts of interest may include, but are not limited to:* *1. Close family member who is an employee of the USAID operating unit managing the project(s) being evaluated or the implementing organization(s) whose project(s) are being evaluated.* *2. Financial interest that is direct, or is significant though indirect, in the implementing organization(s) whose projects are being evaluated or in the outcome of the evaluation.* *3. Current or previous direct or significant though indirect experience with the project(s) being evaluated, including involvement in the project design or previous iterations of the project.* *4. Current or previous work experience or seeking employment with the USAID operating unit managing the evaluation or the implementing organization(s) whose project(s) are being evaluated.* *5. Current or previous work experience with an organization that may be seen as an industry competitor with the implementing organization(s) whose project(s) are being evaluated.* *6. Preconceived ideas toward individuals, groups, organizations, or objectives of the particular projects and organizations being evaluated that could bias the evaluation.*	--

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Signature	
Date	November 04, 2019

Name	Nasson Exaudy Konga
Title	M&E Specialist
Organization	NORC at the University of Chicago (Data for Development)
Assessment Position	Team Member
Evaluation Award Number *(contract or another instrument)*	AID-OAA-I-15-00024/AID-621-TO-17-00005
USAID Project(s) Assessed *(Include project name(s), implementer name(s) and award number(s), if applicable)*	USAID/Water Sector Assessment
I have real or potential conflicts of interest to disclose.	No,
If yes answered above, I disclose the following facts: *Real or potential conflicts of interest may include, but are not limited to:* *1. Close family member who is an employee of the USAID operating unit managing the project(s) being evaluated or the implementing organization(s) whose project(s) are being evaluated.* *2. Financial interest that is direct, or is significant though indirect, in the implementing organization(s) whose projects are being evaluated or in the outcome of the evaluation.* *3. Current or previous direct or significant though indirect experience with the project(s) being evaluated, including involvement in the project design or previous iterations of the project.* *4. Current or previous work experience or seeking employment with the USAID operating unit managing the evaluation or the implementing organization(s) whose project(s) are being evaluated.* *5. Current or previous work experience with an organization that may be seen as an industry competitor with the implementing organization(s) whose project(s) are being evaluated.* *6. Preconceived ideas toward individuals, groups, organizations, or objectives of the particular projects and organizations being evaluated that could bias the evaluation.*	I do not have any conflict of interest to disclose

I certify (1) that I have completed this disclosure form fully and to the best of my ability and (2) that I will update this disclosure form promptly if relevant circumstances change. If I gain access to proprietary information of other companies, then I agree to protect their information from unauthorized use or disclosure for as long as it remains proprietary and refrain from using the information for any purpose other than that for which it was furnished.

Signature	
Date	October 30, 2019

Name	James Origa
Title	Independent Consultant
Organization	ME&A (Data for Development)
Assessment Position	Team Leader
Evaluation Award Number *(contract or another instrument)*	AID-OAA-I-15-00024/AID-621-TO-17-00005
USAID Project(s) Assessed *(Include project name(s), implementer name(s) and award number(s), if applicable)*	USAID – Water Sector Assessment
I have real or potential conflicts of interest to disclose.	--
If yes answered above, I disclose the following facts: *Real or potential conflicts of interest may include, but are not limited to:* *1. Close family member who is an employee of the USAID operating unit managing the project(s) being evaluated or the implementing organization(s) whose project(s) are being evaluated.* *2. Financial interest that is direct, or is significant though indirect, in the implementing organization(s) whose projects are being evaluated or in the outcome of the evaluation.* *3. Current or previous direct or significant though indirect experience with the project(s) being evaluated, including involvement in the project design or previous iterations of the project.* *4. Current or previous work experience or seeking employment with the USAID operating unit managing the evaluation or the implementing organization(s) whose project(s) are being evaluated.* *5. Current or previous work experience with an organization that may be seen as an industry competitor with the implementing organization(s) whose project(s) are being evaluated.* *6. Preconceived ideas toward individuals, groups, organizations, or objectives of the particular projects and organizations being evaluated that could bias the evaluation.*	--

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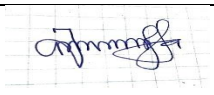
Signature	
Date	November 04, 2019

U.S. Agency for International Development
1300 Pennsylvania Avenue, NW
Washington, DC 20523